MODUL PRAKTEK DEBIAN SERVER

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Perencanaan Debian Server untuk Gateway (Router), DNS Server, Web Server, Dhcp Server, Remote Access Server dan Proxy Server.

Ketentuan :

Koi	nfigurasi Server	
1.	IP WAN/Internet	
	Debian Server	= 172.16.1.2/30 (eth0)
	IP Server DNS ISP	= 172.16.1.1/30
2.	IP LAN	
	Debian Server	= 192.168.50.1/24 (eth1)
3.	Gateway	
	Sesuai Dengan IP yang diberika	n oleh ISP
	(Dalam contoh ini ditentukan IF	P Server ISP adalah 172.16.1.1/30)
		,
Koi	nfigurasi Client	
1.	IPLAN	= 192.168.50.xxx/24
	(DHCP Server address pool	= 192.168.50.10 - 192.168.50.254
2.	Gateway	= 192.168.50.1
Ket	erangan : xxx merupakan addres	s antara 10 sampai 254
		Ĩ
Rer	note Access Server	
1.	SSH Server Port	= 354
Koi	nfigurasi Proxy Server	
1.	Sistem Operasi	= OS (Linux)
2.	Port proxy	= 3128
3.	Cache Manager	= <u>nama peserta@sekolah.sch.id</u>
	(Dalam Latihan ini adalah ad	dmin@sekolah.sch.id)
4.	Visible host	= <u>www.sekolah.sch.id</u>
5.	Transparant proxy	
6.	Blocking Site	= <u>www.youtube.com</u> , <u>www.facebook.com</u>
	-	-
Koi	nfigurasi Router	

1. NAT

= yes

Tambahan Ketentuan :

Hostname	= tkjserver01
Domain	= sekolah.sch.id
Sub Domain	= 1. sub.sekolah.sch.id
	2. mail.sekolah.sch.id
	3. www.sekolah.sch.id
User	= siswa
Root Password	= {Menyesuaikan}
User Password	= {Menyesuaikan}

A. MEMULAI INSTALASI STANDARD

Instalasi dapat dilakukan secara real pada PC/Server dengan menyediakan 2 ethernet card dan/atau dapat menggunakan bantuan software virtual machine (VMWare). A.1. Menggunakan Software VMWARE

1. Siapkan ISO Debian 6.0.4.1 (i386) dan Harddisk Virtual sebanyak 3 GB

New Virtual Machine Wizard
Guest Operating System Installation A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?
Install from:
◎ Installer disc:
BD-ROM Drive (F:) QRN800_SND1
Installer disc image file (iso):
D:\Operating System\Debian ISO 6.0.4.1 (i386) - Poln ▼ Browse
Could not detect which operating system is in this disc image. You will need to specify which operating system will be installed.
\bigcirc I will install the operating system later.
The virtual machine will be created with a blank hard disk.
Help <a>K

2. Guest Operating system pilih Other dan Version pilih Other

lew Virtual Machine Wizan	d	×
Select a Guest Operat Which operating syst	ting System tem will be installed on this virtual machine?	
Guest operating system		
Microsoft Windows		
C Linux		
Novell NetWare		
Sun Solaris		
VMware ESX		
Other		
Version		
Other		•
Help	< Back Next >	Cancel
		Connect

3. Berikan nama Virtual Machine misalnya "*Persiapan_UKK_2013*" dan simpan konfigurasi di folder tertentu agar mudah dicari dan jangan sampai hilang.

New Virtual Machine Wizard	
Name the Virtual Machine What name would you like to use for this virtual machine?	
Virtual machine name:	
Persiapan_UKK_2013	
Location:	
E:\Sekolah\Debian\Konfigurasi Debian\2013 2014	Browse
The default location can be changed at Edit > Preferences.	
< Back Next >	Cancel

4. Siapkan harddisk virtual sebanyak 3 GB.

New Virtual Machine Wizard
Specify Disk Capacity How large do you want this disk to be?
The virtual machine's hard disk is stored as one or more files on the host computer's physical disk. These file(s) start small and become larger as you add applications, files, and data to your virtual machine.
Maximum disk size (GB): 3
Recommended size for Other: 8 GB
Store virtual disk as a single file
Split virtual disk into multiple files
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.
Help < Back Next > Cancel

5. Lakukan customize Hardware untuk menambah memory dan Ethernet card virtual.

Name:	Dercianan LIKK 2013	
	reisiapari_OKK_2013	1
Location:	E:\Sekolah\Debian\Konfigurasi Debian\2013 2014	
Version:	Workstation 8.0	-
Operating Syst	Other	
Hard Disk:	3 GB	
Memory:	256 MB	-
•	4 III	

6. *Upgrade memory (RAM) Virtual* menjadi **512 MB**, dan tambahkan *network adapter* sehingga total ada **2 network adapter** dengan *state bridge*.

Device	Summary	Memory	22
Memory	512 MB	Specify the amount of memory allocated to this virtu machine. The memory size must be a multiple of 4 ME	al .
Processors New CD/DVD (Floppy Network Adaptr Network Adapter Sound Card Display	1 Using file D: \Operating Syst Auto detect Bridged Auto detect Auto detect Auto detect	Memory for this virtual machine: 512 MB 64 GB - 32 GB - 16 GB - 8 GB - 4 GB - 2 GB - 1 GB - 1 GB - 1 GB - 1 GB - 1 GB - 1 GB - 2 GB - 1 GB - 1 GB - 2	imun
	Add Remove]	

7. Lanjutkan dengan mengclick Finish

Name:	Persiapan UKK 2013	
Location:	E:\Sekolah\Debian\Konfigurasi Debian\2013 2014	Γ
Version:	Workstation 8.0	
Operating Syst	Other	
Hard Disk:	3 GB	
Memory:	512 MB	
٠	4 III	

- A.2. Menggunakan Instalasi Langsung di PC/Server
- 1. Siapkan DVD Debian, hidupkan CPU. Masuk ke BIOS, Atur BIOS agar Boot Order diarahkan pertama ke DVD-ROM. Masukan DVD Debian 6.0.2.1. Simpan Konfigurasi BIOS. Restart CPU.

Maka Tampilan awal akan sebagai berikut Pilih **Install**



2. Pilih bahasa English

Choose the language also be the default	to be used for the inst language for the instal	ct a language allation process. The selected language will led system.
	C Albanian Arabic Asturian Basque Belarusian Bosnian Bulgarian Catalan Chinese (Simplified) Chinese (Traditional) Croatian Czech Danish Dutch English Esperanto Estonian Finnish French Galician German Greek	- No localization + - Shqip - - - Asturianu - Euskara - Bosanski - Bosanski - Bosanski - Bosanski - Català - 中文(简体) - 中文(简体) - 中文(衛体) - Hrvatski - Čeština - Dansk - Nederlands - Reglish - Esperanto - Eesti - Suomi - Français - Galego - Deutsch - Eλληνικά *
<go back=""></go>		
	lasto: «Entan» activator	, kuttona

3. Pilih **Other**

[!!] Select your location		
The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.		
This is a shortlist of locations based on the language you selected. Choose "other" if your location is not listed.		
Country, territory or area:		
Antigua and Barbuda Australia Botswana Canada Hong Kong India Ireland New Zealand Nigeria Philippines Singapore South Africa United Kingdom United States Zimbabwe other		
<go back=""></go>		

4. Pilih Benua/Region : Asia

[!!] Select your location The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live. Select the continent or region to which your location belongs.
Continent or region:
Africa Antarctica Asia Atlantic Ocean Caribbean Central America Europe Indian Ocean North America Oceania South America
<go back=""></go>

5. Pilih Negara : Indonesia

6	[!!] Select your location
	The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.
	Listed are locations for: Asia. Use the <go back=""> option to select a different continent or region if your location is not listed.</go>
	Country, territory or area:
	India * Indonesia Iran, Islamic Republic of Iraq Israel Japan Jordan Kazakhstan Korea, Democratic People's Republic of Korea, Republic of Kuwait Kyrgyzstan Lao People's Democratic Republic Lebanon Macao Malaysia Mongolia Myanmar Nepal Oman *
	<go back=""></go>
L	
Та	b> moves; <space> selects; <enter> activates buttons</enter></space>

6. Pilih : **Singapore**

There is no locale defi You can now select your The locale that will be Country to base default	[!] Configu ned for the combinatior preference from the lo used is listed in the locale settings on:	ire) of)cal sec	locales f language and country you have selected. les available for the selected language. cond column.
	Antigua and Barbuda Australia Botswana Canada Hong Kong India Ireland New Zealand Nigeria Philippines <mark>Singapore</mark> South Africa United Kingdom United States Zimbabwe		en_AG en_AU.UTF-8 en_BW.UTF-8 en_CA.UTF-8 en_HK.UTF-8 en_IE.UTF-8 en_NG en_PH.UTF-8 en_SG.UTF-8 en_SG.UTF-8 en_GB.UTF-8 en_US.UTF-8 en_US.UTF-8 en_ZW.UTF-8
<go back=""></go>			

7. Pilih Keyboard Layout : American English



Pilih EthO sebagai Ethernet yang akan dihubungkan langsung ke WAN / Internet.
 (Perhatikan merk Ethernet, agar tidak tertukar saat pemasangan kabel WAN atau LAN)

[!!] Configure the network
Your system has multiple network interfaces. Choose the one to use as the primary network interface during the installation. If possible, the first connected network interface found has been selected.
Primary network interface:
<mark>ethO: Advanced Micro Devices [AMD] 79c970 [PCnet32 LANCE]</mark> eth1: Advanced Micro Devices [AMD] 79c970 [PCnet32 LANCE]
<go back=""></go>

9. Segera batalkan untuk mendapatkan *automatic ip* dari DHCP Server. Apabila sudah terlanjur kembali ke menu sebelumnya.



10. Saat ini kita akan mengkonfigurasi IP WAN/Internet terlebih dahulu, Pilih Configure Network Manually

[!!] Configure the network
From here you can choose to retry DHCP network autoconfiguration (which may succeed if your DHCP server takes a long time to respond) or to configure the network manually. Some DHCP servers require a DHCP hostname to be sent by the client, so you can also choose to retry DHCP network autoconfiguration with a hostname that you provide.
Network configuration method:
Retry network autoconfiguration Retry network autoconfiguration with a DHCP hostname <mark>Configure network manually</mark>
Do not configure the network at this time
<go back=""></go>

11. Isikan IP WAN yang telah ditentukan oleh ISP dengan : 172.16.1.2

[!!] Configure the network	
The IP address is unique to your computer and consists of four numbers separated by periods. If you don't know what to use here, consult your network administrator.	
IP address:	
172.16.1.2	
<go back=""> <continue></continue></go>	

12. Isikan Netmask yang telah ditentukan : **255.255.255.252**

[!!] Configure the network	
The netmask is used to determine which machines are local to your network. network administrator if you do not know the value. The netmask should be four numbers separated by periods.	Consult your entered as
Netmask:	
255.255.255.252	
<go back=""></go>	<continue></continue>

13. Isikan IP Gateway Server Debian, yaitu IP Server ISP : **172.16.1.1** (*secara otomatis sudah terisi, karena hanya 2 (dua) ip saja valid untuk subnetmask /30*)

[!!] Configure the network
The gateway is an IP address (four numbers separated by periods) that indicates the gateway router, also known as the default router. All traffic that goes outside your LAN (for instance, to the Internet) is sent through this router. In rare circumstances, you may have no router; in that case, you can leave this blank. If you don't know the proper answer to this question, consult your network administrator.
Gateway:
172.16.1.1
<go back=""> Continue></go>

14. Isikan Name Server Addresses dengan IP Server ISP : **172.16.1.1** (secara otomatis sudah terisi, karena hanya 2 (dua) ip saja valid untuk subnetmask /30)

[!!] Configure the network
The name servers are used to look up host names on the network. Please enter the IP addresses (not host names) of up to 3 name servers, separated by spaces. Do not use commas. The first name server in the list will be the first to be queried. If you don't want to use any name server, just leave this field blank.
Name server addresses:
<go back=""> KContinues</go>

15. Isikan Hostname Server Debian : tkjserver01

[!] Configure the network
Please enter the hostname for this system.
The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here.
Hostname:
tkjserver01
<go back=""> <continue></continue></go>

16. Isikan Domain Name : sekolah.sch.id

[!] Configure the network
The domain name is the part of your Internet address to the right of your host name. It is often something that ends in .com, .net, .edu, or .org. If you are setting up a home network, you can make something up, but make sure you use the same domain name on all your computers.
Domain name:
sekolah.sch.id
<go back=""> KContinues</go>

17. Isikan password root

You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in distinguisher on a word that could be easily associated with you
You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in dictionaries, or a word that could be easily associated with you.
A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.
The root user should not have an empty password. If you leave this empty, the root account will be disabled and the system's initial user account will be given the power to become root using the "sudo" command.
Note that you will not be able to see the password as you type it.
Root password:
<u>*</u>
<go back=""> <continue></continue></go>

18. Masukan sekali lagi password root untuk verifikasi.



19. Isikan nama user baru : siswa

[!!] Set up users and passwords
A user account will be created for you to use instead of the root account for non-administrative activities.
Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.
Full name for the new user:
siswa
<go back=""> <continue></continue></go>

20. Isikan username untuk account baru : siswa

[!!] Set up users and passwords	
Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combinat of numbers and more lower-case letters.	ion:
Username for your account:	
siswa	
<go back=""> <continue></continue></go>	1

21. Isikan password untuk username siswa

[!!] Set up users and passwords			
A good password will contain a mixture of letters, numbers and punctuation changed at regular intervals.	and should be		
Choose a password for the new user:			
*			
<go back=""></go>	<continue></continue>		

22. Isikan kembali password username siswa untuk verifikasi.

[!!] Set up users and passwords	
Please enter the same user password again to verify you have t	yped it correctly.
Re-enter password to verify:	
*	
<go back=""></go>	<continue></continue>

23. Batalkan untuk sinkronisasi waktu server



24. Pilih Zona Waktu : Pontianak (Time Zone terdekat)

[!] Configure the clock
If the desired time zone is not listed, then please go back to the step "Choose language" and select a country that uses the desired time zone (the country where you live or are located).
Select a city in your time zone:
Jakarta <mark>Pontianak</mark> Makassar Jayapura
<go back=""></go>

25. Partisi Harddisk Linux dapat dilakukan dengan Manual atau Guided.

A. Cara Manual

1. Pilih Manual

[11] Partition disks			
The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results.			
If you choose guided partitioning for an entire disk, you will next be asked which disk should be used.			
Partitioning method:			
Guided – use entire disk Guided – use entire disk and set up LVM Guided – use entire disk and set up encrypted LVM Manual			
<go back=""></go>			

2. Pilih harddisk Virtual I seperti berikut

[!!] Partition disks			
This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.			
Guided partitioning			
SCSI2 (0,0,0) (sda) – 3.2 GB ATA VMware Virtual I			
Undo changes to partitions Finish partitioning and write changes to disk			
<go back=""></go>			

3. Lanjutkan pembuatan partisi baru click Yes



4. Pilih partisi *Free Space* lalu *Enter*



5. Pilih Create a new Partition, lalu Enter



6. Ubah menjadi **2 GB** untuk partisi pertama (*root*).

[!!] Partition disks			
The maximum size for this partition is 3.2 GB.			
Hint: "max" can be used as a shortcut to specify the maximum size, or enter a percentage (e.g. "20%") to use that percentage of the maximum size.			
New partition size:			
2 GB			
<go back=""> <continue></continue></go>			

7. Pilih tipe *Primary*



8. Partisi dibuat pada awal *space* yang tersedia, Pilih *Beginning*, lalu *Enter*.



9. Bootable flag di setting on



10. Selesai mempartisi root pilih Done setting up the partition, lalu Enter

[!!] Partition disks				
You are editing partition #1 of SCSI2 (0,0,0) (sda). No existing file system was detected in this partition.				
i a tition settings.	rariition settings.			
	Use as:	Ext3 journaling file system		
	Mount point: Mount options: Label: Reserved blocks: Typical usage: Bootable flag:	/ defaults none 5% standard on		
Copy data from another partition Delete the partition Done setting up the partition				
<go back=""></go>				

11. Melanjutkan mempartisi swap (virtual memory), Pilih Free Space, lalu Enter.



12. Pilih Create a new partition, lalu Enter



13. Gunakan semua sisa harddisk (partisi swap 2 x RAM) : 2 x 512 MB = 1024 MB \approx 1,2 GB



14. Pilih *Logical* untuk tipe partisi *swap*.



15. Ubah *file system* dengan *click* dan *enter* pada *use as*.

[!!] Partition disks				
You are editing partition #5 of SCSI2 (0,0,0) (sda). No existing file system was detected in this partition.				
Partition settings:				
Use as: Ext3 journaling file system				
Mount point: /home Mount options: defaults Label: none Reserved blocks: 5% Typical usage: standard Bootable flag: off				
Copy data from another partition Delete the partition Done setting up the partition				
<go back=""></go>				

16. Pilih *Swap area,* lalu *Enter*

[!!] Partition disks
How to use this partition:
Ext3 journaling file system Ext4 journaling file system Ext2 file system btrfs journaling file system JFS journaling file system XFS journaling file system FAT16 file system FAT32 file system
swap area
physical volume for encryption physical volume for RAID physical volume for LVM do not use the partition
<go back=""></go>

17. Selesai mempartisi swap dengan memilih *Done setting up the partition*, lalu *Enter*

[!!] Partition disks				
You are editing partition #5 of SCSI2 (0,0,0) (sda). No existing file system was detected in this partition.				
Partition settings:				
	Use as:	swap area		
	Bootable flag:	off		
	Copy data from Delete the par Done setting u	another partition tition p the partition		
<go back=""></go>				

18. Dua partisi sudah disetting, Pilih *Finish partitioning and write changes to disk,* lalu *Enter*



19. *Write the changes to disk*, pilih *Yes* lalu *Enter* untuk memulai memformat.

[!!] Partition disks	
If you continue, the changes listed below will be written to the disks. Otherwi will be able to make further changes manually.	se, you
The partition tables of the following devices are changed: SCSI2 (0,0,0) (sda)	
The following partitions are going to be formatted: partition #1 of SCSI2 (0,0,0) (sda) as ext3 partition #5 of SCSI2 (0,0,0) (sda) as swap	
Write the changes to disks?	
(Yes)	<no></no>

B. Cara Guided

Cara kedua lebih *simple*, karena *Debian* akan memandu dan secara otomatis membagi dan memformat partisi sesuai kebutuhan umumnya. Perlu diperhatikan dalam cara kedua ini, jika diperhatiakn *space* yang tersedia adalah *2 GB* (sesuai total space pada saat pemilihan diawal).

1. Gunakan metode partisi : **Guided – use entire disk**

[11] Partition disks
The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results.
If you choose guided partitioning for an entire disk, you will next be asked which disk should be used.
Partitioning method:
Guided – use entire disk
Guided – use entire disk and set up LVM
Guided – use entire disk and set up encrypted LVM Manual
<go back=""></go>

2. Pilih disk yang akan di partisi.

[!!] Partition disks
Note that all data on the disk you select will be erased, but not before you have confirmed that you really want to make the changes.
Select disk to partition:
SCSI1 (0,0,0) (sda) – 2.1 GB ATA VMware Virtual I
<go back=""></go>

3. Pilih Skema Partisi : All files in one partition

[!] Partition disks
Selected for partitioning:
SCSI1 (0,0,0) (sda) – ATA VMware Virtual I: 2.1 GB
The disk can be partitioned using one of several different schemes. If you are unsure, choose the first one.
Partitioning scheme:
<mark>All files in one partition (recommended for new users)</mark> Separate /home partition Separate /home, /usr, /var, and /tmp partitions
<go back=""></go>

4. Lanjutkan dengan pilihan : Finish partition and write changes to disk



5. Konfirmasi untuk memulai partisi : YES



26. Pilih **No** untuk melanjutkan tanpa mengganti CD/DVD

 [!] Configure the package manager

 Your installation CD or DVD has been scanned; its label is:

 Debian GNU/Linux 6.0.2.1 _Squeeze_ - Official i386 DVD Binary-1 20110626-15:45

 You now have the option to scan additional CDs or DVDs for use by the package manager (apt). Normally these should be from the same set as the installation CD/DVD. If you do not have any additional CDs or DVDs available, this step can just be skipped.

 If you wish to scan another CD or DVD, please insert it now.

 Scan another CD or DVD?

 <Go Back>

31. Pilih No pada network mirror



32. Pilih **No** pada participate in the package usage survey

[!] Configuring popularity-contest	
The system may anonymously supply the distribution developers with statis most used packages on this system. This information influences decisions packages should go on the first distribution CD.	tics about the such as which
If you choose to participate, the automatic submission script will run on sending statistics to the distribution developers. The collected statistic on http://popcon.debian.org/.	ce every week, cs can be viewed
This choice can be later modified by running "dpkg-reconfigure popularity	-contest".
Participate in the package usage survey?	
<yes></yes>	<no></no>

33. Pilih software yang di install hanya Standard system utilities



34. Pilih YES untuk instalasi GRUP boot loader pada master boot record

	[!] Install the GRUB boot loader on a hard disk
ſ	It seems that this new installation is the only operating system on this computer. If so, it should be safe to install the GRUB boot loader to the master boot record of your first hard drive.
	Warning: If the installer failed to detect another operating system that is present on your computer, modifying the master boot record will make that operating system temporarily unbootable, though GRUB can be manually configured later to boot it.
L	Install the GRUB boot loader to the master boot record?
	<go back=""></go>

35. Tunggu instalasi selesai. Apabila sudah selesai, sebelum restart keluarkan DVD Debian dari DVD-ROM, atau dapat masuk ke menu BIOS sebelum booting untuk mengubah boot order.



20. KONFIGURASI DEBIAN ROUTER

1. Gunakan login root untuk konfigurasi.

Skipping font and keymap setup (handled by console-setup).
Setting up console font and keymapdone.
INIT: Entering runlevel: 2
Using makefile–style concurrent boot in runlevel 2.
Starting NFS common utilities: statd.
Starting portmap daemonAlready running
Starting enhanced syslogd: rsyslogd.
Starting ACPI services
Starting deferred execution scheduler: atd.
Starting periodic command scheduler: cron.
Starting MTA: exim4.
Debian GNU/Linux 6.0 tkjserver0 <u>1 t(y</u> 1
tkjserver01 login: root
Password:
Linux tkjserver01 2.6.32–5–686 #1 SMP Mon Jun 13 04:13:06 UTC 2011 i686
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@tkjserver01:~# _



3. Tambahkan IP LAN pada eth1. Gunakan trik *'cut- unCut'* untuk mempercepat dan sesuaikan dengan rancangan untuk IP LAN.



4. Simpan, dan restart



5. Setelah login, cek interface yang sudah diaktifkan

root@tkjserver01·~# ifconfig |less_ (WAN)

6. Konfigurasi sudah ocmasil, maka akan terdapat eth1 (Ethernet LAN yang sudah ditambahkan sebelumnya).

e	Link encap:Ethernet HWaddr 00:0c:29:a3:36:b9 inet addr:172.16.1.2 Bcast:172.16.1.3 Mask:255.255.255.252 inet6 addr: fe80::20c:29ff:fea3:36b9/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:5 errors:0 dropped:0 overruns:0 frame:0 TX packets:30 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:771 (771.0 B) TX bytes:1476 (1.4 KiB) Interrupt:18 Base address:0x2000
LAN	Link encap:Ethernet HWaddr 00:0c:29:a3:36:c3 inet addr:192.168.50.1 Bcast:192.168.50.255 Mask:255.255.255.0 inet6 addr: fe80::20c:29ff:fea3:36c3/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:31 errors:0 dropped:0 overruns:0 frame:0 TX packets:6 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:2331 (2.2 KiB) TX bytes:468 (468.0 B) Interrupt:19 Base address:0x2080
10	Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 inet6 addr: ::1/128 Scope:Host UP LOOPBACK RUNNING MTU:16436 Metric:1

	<pre>inet6 addr: fe80::20c:29ff:fea3:36b9/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:5 errors:0 dropped:0 overruns:0 frame:0 TX packets:30 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:771 (771.0 B) TX bytes:1476 (1.4 KiB) Interrupt:18 Base address:0x2000</pre>
eth1	Link encap:Ethernet HWaddr 00:0c:29:a3:36:c3 inet addr:192.168.50.1 Bcast:192.168.50.255 Mask:255.255.255.0 inet6 addr: fe80::20c:29ff:fea3:36c3/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:31 errors:0 dropped:0 overruns:0 frame:0 TX packets:6 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:2331 (2.2 KiB) TX bytes:468 (468.0 B) Interrupt:19 Base address:0x2080
10	Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 inet6 addr: ::1/128 Scope:Host UP LOOPBACK RUNNING MTU:16436 Metric:1
[3]+ Stop root@tkjse	pped ifconfig less erver01:~# _

7. Edit file sysctl.conf pada folder /etc/



Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law. root@tkjserver01:~# iptables -t nat -n -L Chain PREROUTING (policy ACCEPT) target prot opt source destination Chain POSTROUTING (policy ACCEPT) target prot opt source destination Chain OUTPUT (policy ACCEPT) target prot opt source destination root@tkjserver01:~# _

root@tkjserver01:~# nano /etc/rc.local _



10. Restart server



12. Saatnya menguji di Client (Windows). Sesuaikan dengan konfigurasi di bawa ini

G	General		
	You can get IP settings assigned a this capability. Otherwise, you ne for the appropriate IP settings.	automatically if your network supports ed to ask your network administrator	
	Obtain an IP address automa	atically	
	Output to the following IP address		
	IP address:	192.168.50.2	
	Subnet mask:	255.255.255.0	
	Default gateway:	192.168.50.1	
	Obtain DNS server address a	automatically	
	Output the following DNS server	r addresses:	
	Preferred DNS server:	192.168.50.1	
	Alternate DNS server:	172.16.1.1	
	Validate settings upon exit	Advanced	
Pasti	ikan konfigurasi tcp/ip client Select Administrator: C:\Windows\syste	: sudah benar Cek	
Pasti C:\ Vin Wir	ikan konfigurasi tcp/ip client Select Administrator: C:\Windows\syste .Users\Master>ipconfig ndows IP Configuration reless LAN adapter Wireless Media State	sudah benar Cek m32\cmd exe Network Connection: ffix : : Media disconnected	
Pasti C:\ Win Wir Bth	ikan konfigurasi tcp/ip client Select Administrator: C:\Windows\syste Users\Master>ipconfig ndows IP Configuration reless LAN adapter Wireless Media State Connection-specific DNS Su mernet adapter Local Area C Connection-specific DNS Su Link-local IPv6 Address . IPv4 Address Subnet Mask Default Gateway	Network Connection: 	
Pasti C:\ Win Wir Eth Eth	ikan konfigurasi tcp/ip client Select Administrator: C:\Windows\syste Users\Master>ipconf ig ndows IP Configuration reless LAN adapter Wireless Media State	OK Curtch : sudah benar Cek m32\cmd Cek main Cek main	
Pasti C:\ Win Wir Eth Eth	ikan konfigurasi tcp/ip client Select Administrator: C:\Windows\syste Users\Master>ipconf ig ndows IP Configuration reless LAN adapter Wireless Media State	Sudah benar Cek Metwork Connection: i : Media disconnected ffix .: onnection: ffix .: ffix .: onnection: ffix .: ffix .: ffix .: cek Ndan IP WAN) Cek	



21. KONFIGURASI DEBIAN DNS

1. Masukan DVD Debian lalu Install paket DNS (BIND9)

- 2. Pada debian 6 (Squeeze), nama paket DNS dan servicenya adalah BIND9, namun nama folder yang terbentuk pada server adalah BIND
- 3. Masuk ke folder BIND, Periksa File yang ada pada Folder tersebut.
- 4. Copy file db.local \rightarrow db.sekolah
- 5. Copy file db.local \rightarrow db.sub
- 6. Copy file db.127 \rightarrow db.192
- 7. Periksa kembali file yang terdapat pada folder Bind untuk memastikan file sudah tercopy.



8. Edit dengan perintah *pico* atau *nano* pada folder bind file **named.conf.default-zones** gunakan trik 'cut-unCut'. Ingat baris yang ada jangan dihapus atau diedit. Tambahkan konfigurasi pada baris paling bawah.



9. Edit pada folder bind file **named.conf.options**

<pre>// If there is a firewall between you and names // to talk to, you may need to fix the firewall to allow multiple // ports to talk. See http://www.kb.cert.org/vuls/id/800113 // If your ISP provided one or more IP addresses for stable // nameservers, you probably want to use them as forwarders. // Uncomment the following block, and insert the addresses replacin // the all-0's placeholder forwarders { 172.16.1.1; }; allow-query { any; };_ auth-nxdomain no;</pre>	ptions	{ { directory "/var/cac	che/bind":	.011.001	10115	Tambahkan IP ISP	,
<pre>// If your ISP provided one or more IP addresses for stable // nameservers, you probably want to use them as forwarders. // Uncomment the following block, and insert the addresses replacin // the all-0's placeholder forwarders { 172.16.1.1; }; allow-query { any; };_ auth-nxdomain no; # conform to RFC1035</pre>		// If there is a fi // to talk to, you // ports to talk.	irewall betwee may need to f See http://ww	en you a ix the ⊍w.kb.ce	nd names firewall rt.org/v	vuls/id/800113	y
<pre>forwarders { 172.16.1.1; }; allow-query { any; };_ auth-nxdomain no; # conform to RFC1035</pre>		// If your ISP prov // nameservers, you // Uncomment the fo // the all-0's plac	/ided one or m u probably war ollowing block ceholder	to use	addresse e them a nsert th	≳s for stable ≳s forwarders. ≥e addresses replaci	ng
auth–nxdomain no; # conform to RFC1035		forwarders { 172.16.1.1; }; allow-query { any;					
listen-on-v6 { any; };	;	auth-nxdomain no; listen-on-v6 { any;	# conform t ; };	to RFC10	35		

root@tkjserver01:/etc/bind# pico named.conf.options _

10. Masih pada folder Bind, edit file resolv.conf

root@tkjserverv1:/etc/pind# pico /etc/resolv.

11. Sesuaikan dan tambahkan IP Address name server sebagai berikut.

GNU nano	2.2.4		File: .	/etc/res	solv.c	onf			Modifi	ed
search sek nameserver nameserver nameserver	olah.sch 127.0.0 192.168 172.16	n.id).1 3.50.1 <u>–</u> .1.1								
^G Get Hel ^X Exit	ր îO Wr JJJu	riteOut ^R µstify ^k	Read Where	File ^Y Is ^V	Prev Next	Page Page	K Cut U UnCu	Text [^] C t Text [^] T	Cur Pos To Spell	

12. Edit file db.sekolah

14.

root@tkjserver01:/etc/bind# pico db.sekolah_

Sesuaikan dengan hostname, domain, subdomain dan IP pada rancangan (soal).
 GNU nano 2.2.4 File: db.sekolah

; ; BIND data file ;	e for lo	cal loop	back interface
\$TTL 604800 @ IN	SOA tk	jserver0: 2 604800 86400 2419200 604800	1.sekolah.sch.id. tkjserver01.sekolah.sch.id. (; Serial ; Refresh ; Retry ; Expire) ; Negative Cache TTL
, IN @ IN @ IN	NS MX A	10	tkjserver01.sekolah.sch.id. mail.sekolah.sch.id 192.168.50.1
tkjserver01 www mail	IN IN IN	A CNAME CNAME	192.168.50.1 tkjserver01 tkjserver01
− ^G Get Help ^O ^X Exit ^J	WriteOu Justify	t ^R Rea ^W Who	[Read 18 lines] ad File ^Y Prev Page ^K Cut Text ^C Cur Pos ere Is ^V Next Page ^U UnCut Text^T To Spell
Edit file db.sub			
root@tkjserve⊓	r01:/et	c/bind#	pico db.sub_

15. Sesuaikan dengan sub domain dan ip address pada rancangan (soal)

<u> </u>	<u>iano 2.2</u>	2.4	File: ap.sup
; ; BIND ;	data f	ile for	local loopback interface
\$TTL	604800	0	
0	IN	SOA	sub.sekolah.sch.id. sub.sekolah.sch.id. (2 ; Serial 604800 ; Refresh 86400 ; Retry 2419200 ; Expire 604800) ; Negative Cache TTL
, 0 0	IN IN	NS A	sub.sekolah.sch.id. 192.168.50.1
sub	IN	A	192.168.50.1

[Wrote 16 lines]

root@tkjserver01:/etc/bind# _

16. Edit file db.192

```
root@tkjserver01:/etc/bind# pico db.192_
```

17. Sesuaikan dengan hostname dan IP Address yang digunakan pada rancangan (soal)



18. Restart service DNS (Bind9)

root@tkjserver01:/etc/bind# /etc/init.d/bind9 restart Stopping domain name service...: bind9 waiting for pid 1621 to die. Starting domain name service...: bind9. root@tkjserver01:/etc/bind# _

19. Periksa konfigurasi DNS di Server Debian

	(
root@tkjserver01 Server: Address:	:/etc/bind# 127.0.0.1 127.0.0.1#53	nslookup tkjserver01.sekolah.sch.id	
Name: tkjserve Address: 192.168	r01.sekolah. .50.1	sch.id	
root@tkjserver01 Server: Address:	:/etc/bind# 127.0.0.1 127.0.0.1#53	nslookup sub.sekolah.sch.id	
Name: sub.seko Address: 192.168	lah.sch.id .50.1		
root@tkjserver01 Server∶ Address∶	:/etc/bind# 127.0.0.1 127.0.0.1#53	nslookup mail.sekolah.sch.id	
mail.sekolah.sch Name: tkjserve Address: 192.168	.id cano r01.sekolah. .50.1	nical name = tkjserver01.sekolah.sch.id sch.id	
root@tkjserver01	:/etc/bind#	_	
	(
root@tkjserver01 Server: Address:	:/etc/bind# 127.0.0.1 127.0.0.1#53	nslookup 192.168.50.1	
root@tkjserver01 Server: Address: 1.50.168.192.in-	:/etc/bind# 127.0.0.1 127.0.0.1#53 addr.arpa	nslookup 192.168.50.1 name = servertkj01.sekolah.sch.id.	
root@tkjserver01 Server: Address: 1.50.168.192.in- root@tkjserver01 Server: Address:	:/etc/bind# 127.0.0.1 127.0.0.1#53 addr.arpa :/etc/bind# 127.0.0.1 127.0.0.1#53	nslookup 192.168.50.1 name = servertkj01.sekolah.sch.id. nslookup tkjserver01	
root@tkjserver01 Server: Address: 1.50.168.192.in- root@tkjserver01 Server: Address: Name: tkjserve Address: 192.168	:/etc/bind# 127.0.0.1 127.0.0.1#53 addr.arpa :/etc/bind# 127.0.0.1 127.0.0.1#53 r01.sekolah. .50.1	nslookup 192.168.50.1 name = servertkj01.sekolah.sch.id. nslookup tkjserver01 sch.id	
root@tkjserver01 Server: Address: 1.50.168.192.in- root@tkjserver01 Server: Address: Name: tkjserve Address: 192.168 root@tkjserver01 Server: Address:	:/etc/bind# 127.0.0.1 127.0.0.1#53 addr.arpa :/etc/bind# 127.0.0.1 127.0.0.1#53 r01.sekolah. .50.1 :/etc/bind# 127.0.0.1	nslookup 192.168.50.1 name = servertkj01.sekolah.sch.id. nslookup tkjserver01 sch.id nslookup sekolah.sch.id	
root@tkjserver01 Server: Address: 1.50.168.192.in- root@tkjserver01 Server: Address: Name: tkjserve Address: 192.168 root@tkjserver01 Server: Address: Name: sekolah. Address: 192.168	:/etc/bind# 127.0.0.1 127.0.0.1#53 addr.arpa :/etc/bind# 127.0.0.1 127.0.0.1#53 r01.sekolah. .50.1 :/etc/bind# 127.0.0.1 127.0.0.1#53 sch.id .50.1	nslookup 192.168.50.1 name = servertkj01.sekolah.sch.id. nslookup tkjserver01 sch.id nslookup sekolah.sch.id	
root@tkjserver01 Server: Address: 1.50.168.192.in- root@tkjserver01 Server: Address: Name: tkjserve Address: 192.168 root@tkjserver01 Server: Address: 192.168 root@tkjserver01	:/etc/bind# 127.0.0.1 127.0.0.1#53 addr.arpa :/etc/bind# 127.0.0.1 127.0.0.1#53 r01.sekolah. .50.1 :/etc/bind# 127.0.0.1 127.0.0.1#53 sch.id .50.1 :/etc/bind#	nslookup 192.168.50.1 name = servertkj01.sekolah.sch.id. nslookup tkjserver01 sch.id nslookup sekolah.sch.id	

root@tkjserver01:/etc/bind# nslookup www Server: 127.0.0.1 Address: 127.0.0.1#53
www.sekolah.sch.id canonical name = tkjserver01.sekolah.sch.id. Name: tkjserver01.sekolah.sch.id Address: 192.168.50.1
root@tkjserver01:/etc/bind# nslookup sub Server: 127.0.0.1 Address: 127.0.0.1#53
Name: sub.sekolah.sch.id Address: 192.168.50.1
root@tkjserver01:/etc/bind# nslookup mail Server: 127.0.0.1 Address: 127.0.0.1#53
mail.sekolah.sch.id canonical name = tkjserver01.sekolah.sch.id. Name: tkjserver01.sekolah.sch.id Address: 192.168.50.1
root@tkjserver01:/etc/bind# _

20. Setelah sukses di server debian, kita harus menguji berfungsi tidaknya DNS di client.

General	
You can get IP settings assigned at this capability. Otherwise, you nee for the appropriate IP settings.	utomatically if your network supports d to ask your network administrator
Obtain an IP address automatic	tically
• Use the following IP address:	
IP address:	192.168.50.2
Subnet mask:	255.255.255.0
Default gateway:	192.168.50.1
Obtain DNS server address au	utomatically
O Use the following DNS server	addresses:
Preferred DNS server:	192.168.50.1
Alternate DNS server:	172.16.1.1
Validate settings upon exit	Advanced
	OK Cancel

21. Pada Client (Windows) Gunakan perintah **ipconfig /all** untuk memeriksa semua konfigurasi ip



22. Gunakan perintah nslookup untuk memeriksa apakah client sudah berhasil mendapat DNS Server.

Select Administrator: C:\Windows\system32\cmd.exe	
Media State	Media disconnected Microsoft ISATAP Adapter #4 00-00-00-00-00-00-00-E0 No Yes ch.id

23. Lakukan pengujian satu persatu dari client. Apabila berhasil maka akan ditunjukkan sebagai berikut.

```
Administrator: C:\Windows\system32\cmd.exe

C:\Users\Master\nslookup 192.168.50.1

Server: servertkj01.sekolah.sch.id

Address: 192.168.50.1

Name: servertkj01.sekolah.sch.id

Address: 192.168.50.1

C:\Users\Master\nslookup tkjserver01.sekolah.sch.id

Server: servertkj01.sekolah.sch.id

Address: 192.168.50.1

Name: tkjserver01.sekolah.sch.id

Address: 192.168.50.1

C:\Users\Master\nslookup mail.sekolah.sch.id

Server: servertkj01.sekolah.sch.id

Address: 192.168.50.1

Name: tkjserver01.sekolah.sch.id

Address: 192.168.50.1

Name: tkjserver01.sekolah.sch.id

Address: 192.168.50.1

Name: tkjserver01.sekolah.sch.id

Address: 192.168.50.1

Name: sekolah.sch.id

Address: 192.168.50.1

Name: sub.sekolah.sch.id

Address: 192.168.50.1

Name: sub.sekolah.sch.id

Address: 192.168.50.1

Name: servertkj01.sekolah.sch.id

Address: 192.168.50.1

Name: sub.sekolah.sch.id

Address: 192.168.50.1

Name: tkjserver01.sekolah.sch.id

Address: 192.168.50.1
```

22. KONFIGURASI WEB SERVER

1. Masukan DVD Debian lalu Install paket apache2 dan php5

root@tkjserver01:/etc/bind# apt-get install apache2 php5_

2. Edit file pada folder apache2/sites-available yaitu file **default** sesuaikan dengan nama admin, domain dan subdomain.

root@tkjserver01:/etc/bind# pico /etc/apache2/sites–available/default_



- 3. Restart service apache2, kemudian edit file pada folder /var/www file index.html
 - root@tkjserver01:/etc/bind# /etc/init.d/apache2 restart Restarting web server: apache2 ... waiting . root@tkjserver01:/etc/bind# pico /var/www/index.html_



4. Pada client (windows), buka browser (internet explorer atau browser lain). Ketikan alamat www.sekolah.sch.id



www.sekolah.sch.id berhasil diakses

This is the default web page for this server.

The web server software is running but no content has been added, yet.

5. Atau karena sudah ada alias ketikan saja alamatnya : sekolah.sch.id

Firefox http://sekolah.sch.id/	+
sekolah.sch.id	

www.sekolah.sch.id berhasil diakses

This is the default web page for this server.

The web server software is running but no content has been added, yet.

6. Begitu juga apabila kita mengakses langsung ke IP 192.168.50.1

Firefox Thttp://192.168.50.1/	+
(←)→ □ 192.168.50.1	

www.sekolah.sch.id berhasil diakses

This is the default web page for this server.

The web server software is running but no content has been added, yet.

KONFIGURASI DHCP SERVER

root@tkjserver01:~# apt–get install dhcp3–server

The following extra packages will be installed: isc-dhcp-server Suggested packages: isc-dhcp-server-ldap The following NEW packages will be installed: dhcp3-server isc-dhcp-server 0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded. Need to get 0 B/403 kB of archives. After this operation, 926 kB of additional disk space will be used. Do you want to continue [Y/n]? y Preconfiguring packages Selecting previously deselected package isc-dhcp-server. (Reading database ... 23213 files and directories currently installed.) Unpacking isc-dhcp-server (from .../isc-dhcp-server_4.1.1-P1-15+squeeze3_i386.de b) Selecting previously deselected package dhcp3-server. Unpacking dhcp3-server (from .../dhcp3-server_4.1.1-P1-15+squeeze3_all.deb) ... Processing triggers for man-db . Setting up isc-dhcp-server (4.1.1-P1-15+squeeze3) ... Generating /etc/default/isc-dhcp-server. Starting ISC DHCP server: dhcpdcheck syslog for diagnostics. ... failed! invoke-rc.d: initscript isc-dhcp-server, action "start" failed. Setting up dhcp3-server (4.1.1-P1-15+squeeze3) ... root@tkjserver01:~# _

root@tkjserver01:~# cd /etc/dhcp/ root@tkjserver01:/etc/dhcp# ls dhclient.conf dhclient-enter-hooks.d dhclient-exit-hooks.d dhcpd.conf root@tkjserver01:/etc/dhcp# cp dhcpd.conf dhcpd.conf.bak root@tkjserver01:/etc/dhcp# ls dhclient.conf dhclient-exit-hooks.d dhcpd.conf.bak dhclient-enter-hooks.d dhcpd.conf root@tkjserver01:/etc/dhcp# _

root@tkjserver01:/etc/dhcp# nano dhcpd.conf_

GNU nano 2.2.4 File: dhcpd.conf Modified # option definitions common to all supported networks... # Menyesuaikan domain dan Nama Server by Admin
option domain-name "sekolah.sch.id"; option domain-name-servers tkjserver01.sekolah.sch.id; default-lease-time 600; max-lease-time 7200; # If this DHCP server is the official DHCP server for the local # network, the authoritative directive should be uncommented.
Mengaktifkan official DHCP By Admin_ authoritative; # Use this to send dhcp log messages to a different log file (you also # have to hack syslog.conf to complete the redirection). log-facility local7; # No service will be given on this subnet, but declaring it helps the # DHCP server to understand the network topology. ^O WriteOut ^J Justify ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos ^₩ Where Is ^V Next Page ^U UnCut Text^T To Spell ^G Get Help ^X Exit GNU nano 2.2.4 File: dhcpd.conf Modified #subnet 10.254.239.32 netmask 255.255.255.224 # range dynamic-bootp 10.254.239.40 10.254.239.60; option broadcast-address 10.254.239.31; # option routers rtr-239-32-1.example.org; # #} # A slightly different configuration for an internal subnet.
Menyesuaikan Konfigurasi untuk Client / LAN (eth1) by Admin
subnet 192.168.50.0 netmask 255.255.255.0 {
range 192.168.50.10 192.168.50.254; option domain-name-servers 192.168.50.1,172.16.1.1; option domain-name "sekolah.sch.id"; option routers 192.168.50.1; option broadcast-address 192.168.50.255; default-lease-time 600; max-lease-time 7200; 3 # Hosts which require special configuration options can be listed in # host statements. If no address is specified, the address will be ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos ^₩ Where Is ^V Next Page ^U UnCut Text T To Spell ^O WriteOut ^J Justify ^G Get Help ^X Exit root@tkjserver01:/etc/dhcp# /etc/init.d/isc-dhcp-server restart Stopping ISC DHCP server: dhcpd failed! Starting ISC DHCP server: dhcpd. root@tkjserver01:/etc/dhcp# /etc/init.d/isc-dhcp-server restart Stopping ISC DHCP server: dhcpd. Starting ISC DHCP server: dhcpd. root@tkjserver01:/etc/dhcp# .

General	Alternate Configuration				-	
You car this cap for the	n get IP settings assigned au pability. Otherwise, you nee appropriate IP settings.	utomatically if yo d to ask your ne	our network twork admir	supports histrator		
0	btain an IP address automat	tically				
- O U:	se the following IP address:					
IP a	ddress:					
Subr	net mask:					
Defa	ult gateway:					
@ 0'	btain DNS server address au	utomatically				
- O U:	se the following DNS server	addresses:				
Pref	erred DNS server:					
Alter	mate DNS server:	1				
V	alidate settings upon exit		Adv	anced		
		_				
			OV I	Connel		
			ОК	Cancel		
			ок	Cancel		
administ	trator: C:\Windows\system3	2\cmd.exe	ок	Cancel		
: Administ	trator: C:\Windows\system3 \Master>ipconfig ∕a	2\cmd.exe	ок	Cancel		
: Administ : \Users` indows)	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration	2\cmd.exe	OK	Cancel		
Adminis Visers indows Host N	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration Name	2\cmd.exe	OK	Cancel		
Adminis NUsers indows Host M Priman Node	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration Name	2\cmd.exe	OK : Excell : Hybrid	ent		
: Adminis :\Users\ indows] Host Primar Node] IP Rot WINS]	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration Name	2\cmd.exe	CK Excell Hybrid No No	ent		
Adminis Users' indows Host M Priman Node J IP Roo WINS J DNS Su	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration Vame Ty Dns Suffix Type Upe Type Type Type	2\cmd.exe	CK Excell Hybrid No Sekola	Cancel ent h.sch.id		
Adminis NUsers' indows I Host I Primar Node I IP Rou WINS I DNS Su thernet	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration Name ry Dns Suffix Type Using Enabled Proxy Enabled Iffix Search List. adapter Local Area	2\cmd.exe	OK Excell Hybrid No sekola n:	ent h.sch.id		
Adminis NUsers' indows Host H Priman Node J IP Rou WINS I DNS Su thernet Connec Descri	trator: C:\Windows\system3 Master>ipconfig /a IP Configuration Name	2\cmd.exe	CK Excell Hybrid No No sekola Sekola Realte	Cancel ent h.sch.id k RTL8102	2E/RTL8103	E Family PC
Administ Nost I Primar Node T IP Rol UNS So thernet Connec Descri Ethern Physic	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration Name Type Type If Suffix Proxy Enabled If Search List. adapter Local Area ction-specific DNS iption	2\cmd.exe	OK Excell Hybrid No sekola n: Realte QO-EO-	Cancel ent h.sch.id k.Sch.id k.RTL8102 65-03-79-	2E/RTL8103 -1C	E Family PC
Adminis NUsers' indows Host I Priman Node J IP Rou WINS I DNS Su thernet Connec Descr: t Ethern Physic DHCP I Autocc	trator: C:\Windows\system3 Master>ipconfig /a IP Configuration Name Ty Dns Suffix Type Iype Iting Enabled Proxy Enabled adapter Local Area ction-specific DNS iption het NIC (NDIS 6.20) cal Address Enabled Enabled	2\cmd.exe	CK Excell Hybrid No Sekola Realte Realte 20-E0- Yes Yes	Cancel ent h.sch.id k.Sch.id k.RTL8102 65-03-79-	2E/RTL8103 -1C	E Family P(
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Adminis NUsers' indows Host I Priman Node 1 IP Rou WINS 1 DNS Su chernet Connec Descr: Ethern Physic DHCP I Autocc Link-1 IPV4 f Subnet Lease Defau DHCP S DHCP V CONNES Connec Connec DHCP I Autocc Link-1 IPV4 f Subnet Lease Defau DHCP V CONS Se	trator: C:\Windows\system3 \Master>ipconfig /a IP Configuration Name Ty Dns Suffix Sype If you for the state of the system of the state of the system of the state of the system of the system of the system of the system of the system of the system of the system of the system of the system of the system of the	2\cmd.exe	OK : Excell : Hybrid : No : No : sekola : sekola : sekola : Realte : 00-E0- : Yes : Yes : Yes : fe80:: : 192.16 : 234938 : 00-01- : 234938 : 00-01- : 192.16	Cancel ent h.sch.id h.sch.id k RTL8102 65-03-79- b4ad:d651 8.50.10(1) 5.255.0 ember 202 8.50.1 8.50.1 469 00-01-16- 8.50.1	2E/RTL8103 -1C -1C -184ad:6ff Preferred> 12 10:47:2 12 10:57:2 -BC-CB-29-	E Family P(5%10(Prefer 3 3 00-E0-65-03

Property	Value	1
Connection-specific DN	sekolah.sch.id	
Description	Realtek RTL8102E/RTL8103E Family	
Physical Address	00-E0-65-03-79-1C	
DHCP Enabled	Yes	
IPv4 Address	192.168.50.10	
IPv4 Subnet Mask	255.255.255.0	
Lease Obtained	29 Nopember 2012 10:47:23	
Lease Expires	29 Nopember 2012 10:57:23	1
IPv4 Default Gateway	192.168.50.1	
IPv4 DHCP Server	192.168.50.1	
IPv4 DNS Servers	192.168.50.1	
	172.16.1.1	
IPv4 WINS Server		
NetBIOS over Topip En	Yes	
Link-local IPv6 Address	fe80::b4ad:d65b:84ad:6ff5%10	ľ
IPv6 Default Gateway		-
< III	•	

```
C:\Users\Master>nslookup
Default Server: tkjserver01.sekolah.sch.id
Address: 192.168.50.1
```

```
root@tkjserver01:/etc/dhcp# tail -f /var/lib/dhcp/dhcpd.leases
lease 192.168.50.10 {
    starts 4 2012/11/29 10:56:07;
    ends 4 2012/11/29 10:56:07;
    binding state active;
    next binding state free;
    hardware ethernet 00:e0:65:03:79:1c;
    uid "\001\000\340e\003y\034";
    client-hostname "Excellent";
}
lease 192.168.50.11 {
    starts 4 2012/11/29 10:57:11;
    ends 4 2012/11/29 10:57:11;
    ends 4 2012/11/29 10:57:11;
    binding state active;
    next binding state free;
    hardware ethernet 00:23:7a:7e:03:8e;
    uid "\001\000#Z"\003\216";
    client-hostname "BLACKBERRY-2D39";
}
```

named N)	1087	bind	22u	IPv4	3896	OtO	ТСР	172.16.1.2:53 (LISTE
named TEN)	1087	bind	23u	IPv4	3898	OtO	ТСР	192.168.50.1:53 (LIS
named N)	1087	bind	24u	IPv4	3901	OtO	ТСР	127.0.0.1:953 (LISTE
named named named named named exim4	1087 1087 1087 1087 1087 1087 1369	bind bind bind bind bind Debian-exim	25u 512u 513u 514u 515u 3u	IPv6 IPv6 IPv4 IPv4 IPv4 IPv4	3902 3888 3893 3895 3897 4539	0t0 0t0 0t0 0t0 0t0 0t0	TCP UDP UDP UDP UDP TCP	[::1]:953 (LISTEN) *:53 127.0.0.1:53 172.16.1.2:53 192.168.50.1:53 127.0.0.1:25 (LISTEN
éxim4 apache2 apache2 apache2 apache2 apache2 apache2 apache2 dhcpd	1369 2236 2240 2241 2242 2243 2244 2248 2248 2458	Debian-exim root www-data www-data www-data www-data www-data www-data root	1 4u 4u 4u 4u 4u 4u 4u 4u 7u	IPv6 IPv6 IPv6 IPv6 IPv6 IPv6 IPv6 IPv6	4540 7280 7280 7280 7280 7280 7280 7280 7835	0t0 0t0 0t0 0t0 0t0 0t0 0t0 0t0 0t0	TCP TCP TCP TCP TCP TCP TCP UDP	[::1]:25 (LISTEN) *:80 (LISTEN) *:80 (LISTEN) *:80 (LISTEN) *:80 (LISTEN) *:80 (LISTEN) *:80 (LISTEN) *:80 (LISTEN) *:67
[1]+ Stop root@tkjse	ped rver()1:/etc/dhcp	lsof + lsof -	-i -n -i -n -	-P less P less_	3		
udp udp udp udp	0 0 0	0 192.16 0 172.16 0 127.0. 0 0.0.0.	8.50.1:5 .1.2:53 0.1:53 0:58680	3	0.0.0. 0.0.0. 0.0.0. 0.0.0.	0:* 0:* 0:*		
udp udp udp udp	0 0 0	0 0.0.0. 312 172.16 0 0.0.0. 0 0.0.0.	0:07 0:1.2:191 0:111 0:654	.55	0.0.0. 199.7. 0.0.0. 0.0.0.	83.42: 0:* 0:*	:53	ESTABLISHED
raw Active UNI Proto RefC unix 2	0 X dor nt Fi	0 0.0.0. nain sockets lags T] D	0:1 (server ype GRAM	s and Stat	0.0.0. establishe e	0:* ed) I-Node 2330	9	7 Path @/org/kernel/udev/ude
unix 2 unix 6 unix 2 unix 2 unix 2 unix 2 unix 2 unix 3 unix 3		ACC] S] D] D] D] D] D] D] D] D] D	TREAM GRAM GRAM GRAM GRAM GRAM GRAM	LIST	ENING	3827 3793 7828 4603 3870 3824 2335 2334		/var/run/acpid.socket /dev/log

[2]+ Stopped netstat -an | less root@tkjserver01:/etc/dhcp# netstat -an |less_

INSTALASI SSH

root@tkjserver01:~# apt-get install ssh_ root@tkjserver01:~# cd /etc/ss ssh/ ssl/ root@tkjserver01:~# cd /etc/ssh root@tkjserver01:/etc/ssh# ls moduli sshd_config ssh_host_dsa_key.pub ssh_host_rsa_key root@tkjserver01:/etc/ssh# cp sshd_config sshd_config.bak root@tkjserver01:/etc/ssh# ls moduli sshd_config ssh_host_dsa_key ssh_host_rsa_key ssh_config sshd_config.bak ssh_host_dsa_key.pub ssh_host_rsa_key.pub root@tkjserver01:/etc/ssh# ls

root@tkjserver01:/etc/ssh# nano sshd_config_

Package generated configuration file # See the sshd_config(5) manpage for details
What ports, IPs and protocols we listen for
<pre># Fort 22 Port 354 #Menonaktifkan_Port Default ssh 22 menjadi 354 # Use these options to restrict which interfaces/protocols sshd will bind to #ListenAddress :: #ListenAddress 0.0.0.0 Protocol 2</pre>
HostKeys for protocol version 2 HostKey /etc/ssh/ssh_host_rsa_key HostKey /etc/ssh/ssh_host_dsa_key #Privilege Separation is turned on for security UsePrivilegeSeparation yes
Lifetime and size of ephemeral version 1 server key KeyRegenerationInterval 3600 ServerKeyBits 768
^G Get Help
GNU nano 2.2.4 File: sshd_config Modified
HostKey /etc/ssh/ssh_host_rsa_key HostKey /etc/ssh/ssh_host_dsa_key #Privilege Separation is turned on for security UsePrivilegeSeparation yes
Lifetime and size of ephemeral version 1 server key KeyRegenerationInterval 3600 ServerKeyBits 768
Logging SyslogFacility AUTH LogLevel INFO
Authentication: LoginGraceTime 120 # PermitRootLogin yes PermitRootLogin no #Menonaktifkan login langsung root via ssh_ StrictModes yes
RSAAuthentication yes
°G Get Help °O WriteOut °R Read File °Y Prev Page °K Cut Text °C Cur Pos °X Exit °J Justify °W Where Is °V Next Page °U UnCut Text°T To Spell

root@tkjserver01:/etc/ssh# /etc/init.d/ssh restart Restarting OpenBSD Secure Shell server: sshd. root@tkjserver01:/etc/ssh# _

ory:			
Session	Basic options for your F	PuTTY session	
Logging	Specify the destination you want	to connect to	
Terminal	Host Name (or IP address)	Port	
Keyboard	192 165 50 1	354	
Bell	Connection to act	001	
Window	Connection type:	A Serial	
Appearance			
Behaviour	Load, save or delete a stored set	ssion	
Translation	Saved Sessions		
Selection			
Colours	Default Settings	beal	
Connection			
Data		Save	
Teleat		Delete	
Blogin		Delete	
Serial	Construction and		
	Always Never OI	Only on clean exit	
		,	
About	Ope	n Cancel	
Y Security Alert		x	
· · · ·			
A The server's H	host key is not cached in the registr	y. You	
The server's l have no guar	host key is not cached in the registr rantee that the server is the comput	y. You er you	
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```
Part 192.168.50.1 - PuTTY
login as: root
root@192.168.50.1's password:
Access denied
```



login as: siswa siswa@192.168.50.1's password: Access denied siswa@192.168.50.1's password: Linux tkjserver01 2.6.32-5-686 #1 SMP Mon Jan 16 16:04:25 UTC 2012 i686 The programs included with the Debian GNU/Linux system are free software; the exact distribution terms for each program are described in the individual files in /usr/share/doc/*/copyright. Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law. siswa@tkjserver01:~\$ su Password: root@tkjserver01:/home/siswa#

┍╼╸╸╸

```
        B siswa@tkjserver01: ~
        root@tkjserver01:/home/siswa# who
        root tty1 2012-11-29 17:23
        siswa pts/0 2012-11-29 18:19 (192.168.50.10)
        root@tkjserver01:/home/siswa#
```

23. KONFIGURASI PROXY SERVER

1. Masukan DVD Debian lalu Install paket squid

root@tkjserver01:~# apt-get install squid_

- 2. Copy file squid.conf → squid.conf.bak (bertujuan untuk membackup konfigurasi lama apabila sewaktu-waktu diperlukan Perhatikan selalu dan pastikan letak file selalu di folder /etc/squid) root@tkjserver01:~# cp /etc/squid/squid.conf /etc/squid/squid.conf.bak_
- 3. Menghapus file squid.conf

root@tkjserver01:~# rm /etc/squid/squid.conf_

- Membuat file squid.conf root@tkjserver01:~# pico /etc/squid/squid.conf_
- 5. Tulis konfigurasi squid sebagai berikut :

	(LAN)
GNU nano 2.2.4 File: squid.con	f Modified
acl all src all acl localnet src 192.168.50.0/24 acl situs url_regex –i "/etc/squid/blokir.t <u>xt</u>	Situs yang akan diblok dibuat pada folder dan file ini
http_access deny situs http_access allow localnet http_access allow all http_port 3128 transparent	Port Proxy yang digunakan adalah 3128 dan proxy yang digunakan adalah transparent
cache_mem 8 mb cache_mgr admin@sekolah.sch.id cache_replacement_policy heap LFUDA cache_dir aufs /cache 1024 24 256 cache_store_log none cache_access_log /var/log/squid/access.log	- Visible hostsname
cache_effective_user proxy cache_effective_group proxy memory_replacement_policy heap GDSF store_dir_select_algorithm round-robin visible_hostname www.sekolah.sch.id_	che manager
^G Get Help ↑O WriteOut ↑R Read File ↑Y Pre ↑X Exit ↑J Justify ↑W Where Is ↑V Nex	v Page <mark>^K</mark> Cut Text <mark>^C</mark> Cur Pos t Page <mark>^U</mark> UnCut Text ^T To Spell

Range IP Address Client

6. Membuat daftar situs yang akan diblokir

GNU nano 2.2.4	File: blo	okir.txt	
sub.sekolah.sch.id www.facebook.com www.youtube.com			
-			
_	[Read	3 lines]	-
^G Get Help ^O Wri ^X Exit	iteOut R Read File stify A Where Is	Y Prev Page ^K Cut V Next Page ^U Un(t Text ^{CC} Cur Pos Cut Text ^{CT} To Spell

7. Buat Folder cache untuk proxy (ingat letaknya harus di folder root)

root@tkjserver01:~# mkdir /cache_

8. Lanjutkan dengan perintah chown (change owner) pada file blokir. Stop Proxy sementara untuk membuat swap directory proxy.

```
root@tkjserver01:~# chown -R proxy:proxy /etc/squid/blokir.txt
root@tkjserver01:~# chown -R proxy:proxy /cache
root@tkjserver01:~# /etc/init.d/squid stop
Stopping Squid HTTP proxy: squid.
root@tkjserver01:~# squid -z
2012/01/28 12:35:46| Creating Swap Directories
root@tkjserver01:~# _
```

9. Jalankan kembali proxy dan edit file rc.local tambahkan routing

root@tkjserver01:~# /etc/init.d/squid start Starting Squid HTTP proxy: squid. root@tkjserver01:~# pico /etc/rc.local_

GNU nano 2.2.4 File: /etc/rc.local Modified

#!/bin/sh -e
#
rc.local
#
This script is executed at the end of each multiuser runlevel.
Make sure that the script will "exit 0" on success or any other
value on error.
#
In order to enable or disable this script just change the execution
bits.
#
By default this script does nothing.
iptables -t nat -A PREROUTING -p tcp --dport 80 -j REDIRECT --to-port 3128_
iptables -t nat -A POSTROUTING -o eth0 -j MASQUERADE
exit 0



10. Restart proxy

```
root@tkjserver01:~# /etc/init.d/squid restart
Restarting Squid HTTP proxy: squid Waiting............done.
.
root@tkjserver01:~# _
```

Firefo	х 🔻	http://www.sekolah.sch.id/	ERROR: The requested URL could not ×	+				
÷ -	> [🕘 sub.sekolah.sch.id			☆▼	C	8	-

ERROR

The requested URL could not be retrieved

The following error was encountered while trying to retrieve the URL: http://sub.sekolah.sch.id/

Access Denied.

Access control configuration prevents your request from being allowed at this time. Please contact your service provider if you feel this is incorrect.

Your cache administrator is admin@sekolah.sch.id.

Generated Thu, 29 Nov 2012 14:09:51 GMT by www.sekolah.sch.id (squid/2.7.STABLE9)

Fire	бох ▼		http://www.sekolah.sch.id/	\bigcirc ERROR: The requested URL could not \times	ERROR: The requested URL could not ×	ERROR: The	requested URL could not $ imes$	+
÷	÷	3	www.facebook.com			☆ ⊽ C	🚼 🗝 Google	

ERROR

The requested URL could not be retrieved

The following error was encountered while trying to retrieve the URL: http://www.facebook.com/

Access Denied.

Access control configuration prevents your request from being allowed at this time. Please contact your service provider if you feel this is incorrect.

Your cache administrator is admin@sekolah.sch.id.

Generated Thu, 29 Nov 2012 14:14:37 GMT by www.sekolah.sch.id (squid/2.7.STABLE9)

Firefox	http://www.sekolah.sch.id/	× ERROR: The requested URL could not × ERROR: The requested URL could not >	ERROR: The requested URL could not × +
$\leftarrow \rightarrow$	@ www.youtube.com		☆ マ C 🚼 - Google

ERROR

The requested URL could not be retrieved

The following error was encountered while trying to retrieve the URL: http://www.youtube.com/

Access Denied.

Access control configuration prevents your request from being allowed at this time. Please contact your service provider if you feel this is incorrect. Your cache administrator is <u>admin@sekolah.sch.id</u>.

Generated Thu, 29 Nov 2012 14:16:28 GMT by www.sekolah.sch.id (squid/2.7.STABLE9)

```
1354254020.225
                   0 192.168.50.10 TCP_DENIED/403 1560 GET http://www.youtube.c
om/favicon.ico - NONE/- text/html
^C
root@tkjserver01:~# tail -f /var/log/squid/access.log
                    0 192.168.50.10 TCP_DENIED/403 1562 GET http://www.facebook.
1354198477.951
com/favicon.ico - NONE/- text/html
1354198583.286
                   3 192.168.50.10 TCP_MISS/200 608 GET http://youtube.com/ – D
IRECT/192.168.50.1 text/html
1354198583.315
                     1 192.168.50.10 TCP_MISS/404 609 GET http://youtube.com/favi
con.ico - DIRECT/192.168.50.1 text/html
1354198588.822
                    0 192.168.50.10 TCP_DENIED/403 1538 GET http://www.youtube.c
    - NONE/- text/html
om/
1354198588.849
                     0 192.168.50.10 TCP_DENIED/403 1560 GET http://www.youtube.c
om/favicon.ico - NONE/- text/html
                    0 192.168.50.10 TCP_DENIED/403 1540 GET http://www.facebook.
1354254012.237
     - NONE/-
              text/html
com/
1354254012.419
                     0 192.168.50.10 TCP_DENIED/403 1562 GET http://www.facebook.
com/favicon.ico - NONE/- text/html
                    0 192.168.50.10 TCP_DENIED/403 1538 GET http://www.youtube.c
1354254020.173
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1354254020.220
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om/favicon.ico - NONE/- text/html
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om/favicon.ico - NONE/- text/html
1354254020.225
                    0 192.168.50.10 TCP_DENIED/403 1560 GET http://www.youtube.c
om/favicon.ico - NONE/- text/html
 C.
root@tkjserver01:~# tail -f /var/log/squid/
access.log cache.log store.log
root@tkjserver01:~# tail -f /var/log/squid/cache.log
2012/11/30 12:33:42
2012/11/30 12:33:42
                              O Objects expired.
O Objects cancelled.
2012/11/30 12:33:42|
                              O Duplicate URLs purged.
2012/11/30 12:33:42
                              O Swapfile clashes avoided.
2012/11/30 12:33:42|
                        Took 0.3 seconds (
                                             11.1 objects/sec).
                     Beginning Validation Procedure
2012/11/30 12:33:42
                        Completed Validation Procedure
Validated 3 Entries
2012/11/30 12:33:42|
2012/11/30 12:33:42
2012/11/30 12:33:42
                        store_swap_size = 12k
2012/11/30 12:33:42| storeLateRelease: released 0 objects
```

Catatan :