

24 November 2021



MikroTik & VMware ESXi untuk Jaringan Kampus

Azriel Christian Nurcahyo, M.Kom.

**Institut Shanti Bhuana
2021/2022**



Perkenalan

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- S1 Teknik Informatika Universitas Kristen Immanuel, Yogyakarta (2017)
- S2 Teknik Informatika Universitas AMIKOM, Yogyakarta (2019)
- Network Administrator UKRIM, Yogyakarta (2016-2018)
- System Administrator Institut Shanti Bhuana, Bengkayang, Kalimantan Barat.
- Dosen Teknologi Informasi, Institut Shanti Bhuana, Bengkayang, Kalimantan Barat.



MikroTik

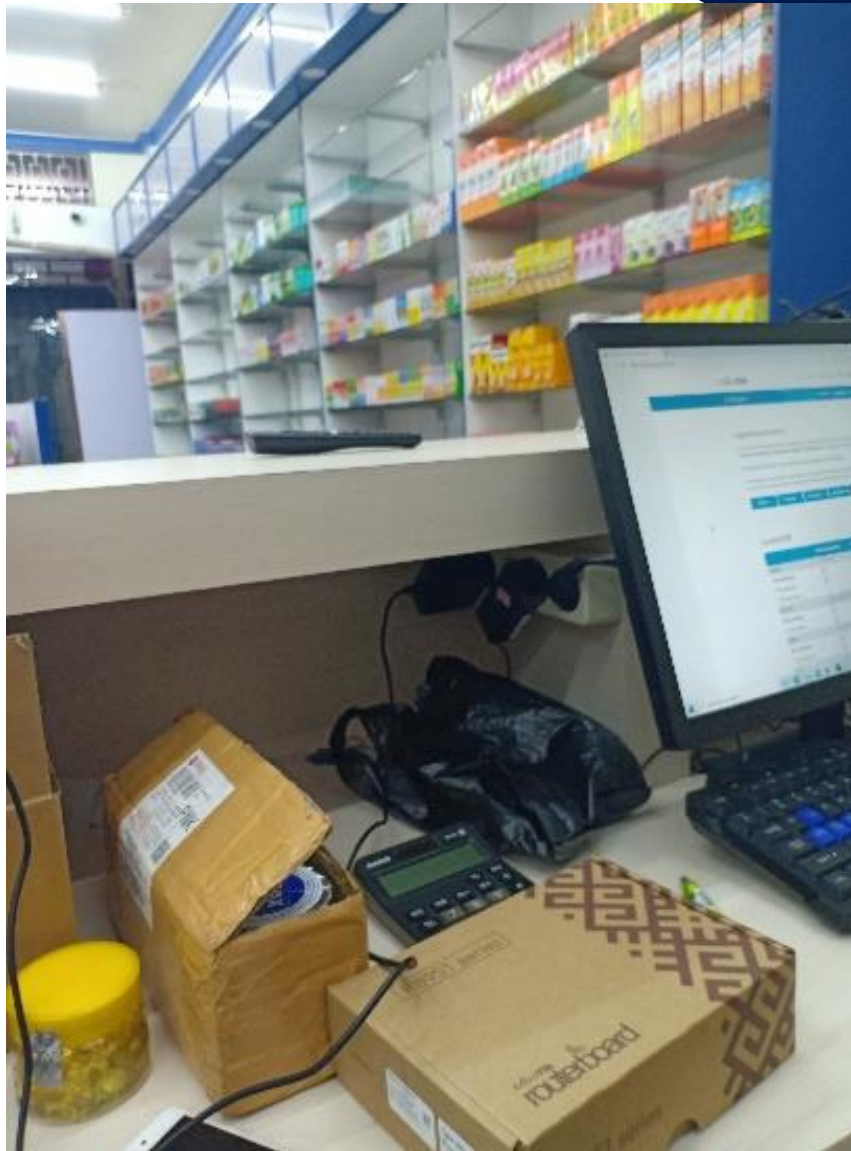


Tipe-tipe User MikroTik



Tipe-tipe User MikroTik

5



6



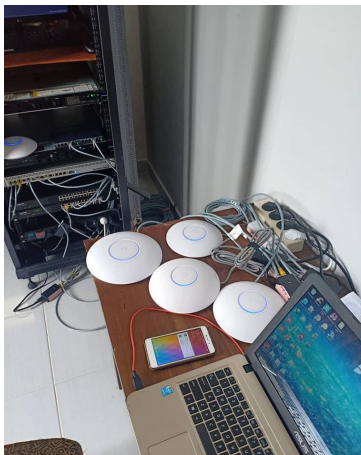
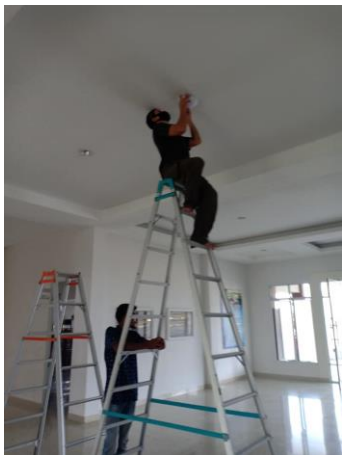
Tipe-tipe User MikroTik

7



MASALAH JARINGAN KAMPUS DI ERA COVID-19

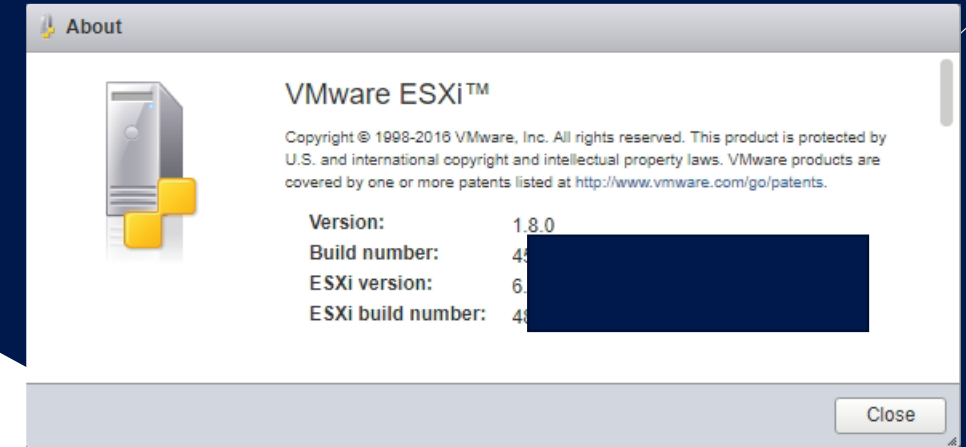
Pandemi saat ini pembelajaran tentu semuanya berjalan via online. Namun hal itu menjadi tantangan bagi kami yang berada di zona perbatasan Kalimantan Barat di mana ip publik saat ini jumlahnya terbatas, dan juga koneksi kebutuhan untuk hosting ke publik semakin hari semakin banyak hal ini terjadi di kampus kami yang membutuhkan alokasi seperti website kampus, server moodle kampus, server siakad, repository, sister dikti dan lain lain.



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MASALAH JARINGAN KAMPUS DI ERA COVID-19

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☐	Virtual machine	Guest OS	Host name
☐	VM2Linux	Ubuntu Linux (64-bit)	vm2
☐	VM3Linux	Ubuntu Linux (64-bit)	vm3
☐	VM4Linux	Ubuntu Linux (64-bit)	vm4
☐	VM1Linux	Ubuntu Linux (64-bit)	vm1
☐	Windows	Microsoft Windows 10 (6...	
☐	VM5Linux	Ubuntu Linux (64-bit)	Unknown

MASALAH JARINGAN KAMPUS DI ERA COVID-19

AIS - INSTITUT SB

Login

Username

Password

MASUK LUPA PASSWORD

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SBLMS: Lain-lain

lms.shantibhuana.ac.id/course/index.php?categoryid=26

INDONESIAN (ID)

Anda belum login. (Masuk)

Cari kursus

Maju

Perbesar semua

Evaluasi

2021 - 2022 Semester III - Manajemen

Unit Komputer

Unit Komputer

MNJ 31021 - Bahasa Inggris 1

Pengajar: Dr. Helena Anggraeni (Reni) Tjondro Sugianto S.T, M.T

MNJ 31011 - Pengantar Manajemen

Journal of Information Technology

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Penerbitan Maret 2021 dan September 2021

Volume 1 Nomor 1, Maret 2021 (deadline submissions Februari 2021)

Volume 1 Nomor 2, September 2021 (deadline submissions Agustus 2021)

Article Template

MAKE A SUBMISSION

INSTITUT SHANTI BHUANA

Username

Password

LOGIN

Lupa Password

CARI DATA

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SISTER

Sistem Informasi Sumberdaya Terintegrasi

Kopertis Wilayah XI

USERNAME

Tulis username/email anda...

PASSWORD

Tulis password anda...

LOGIN

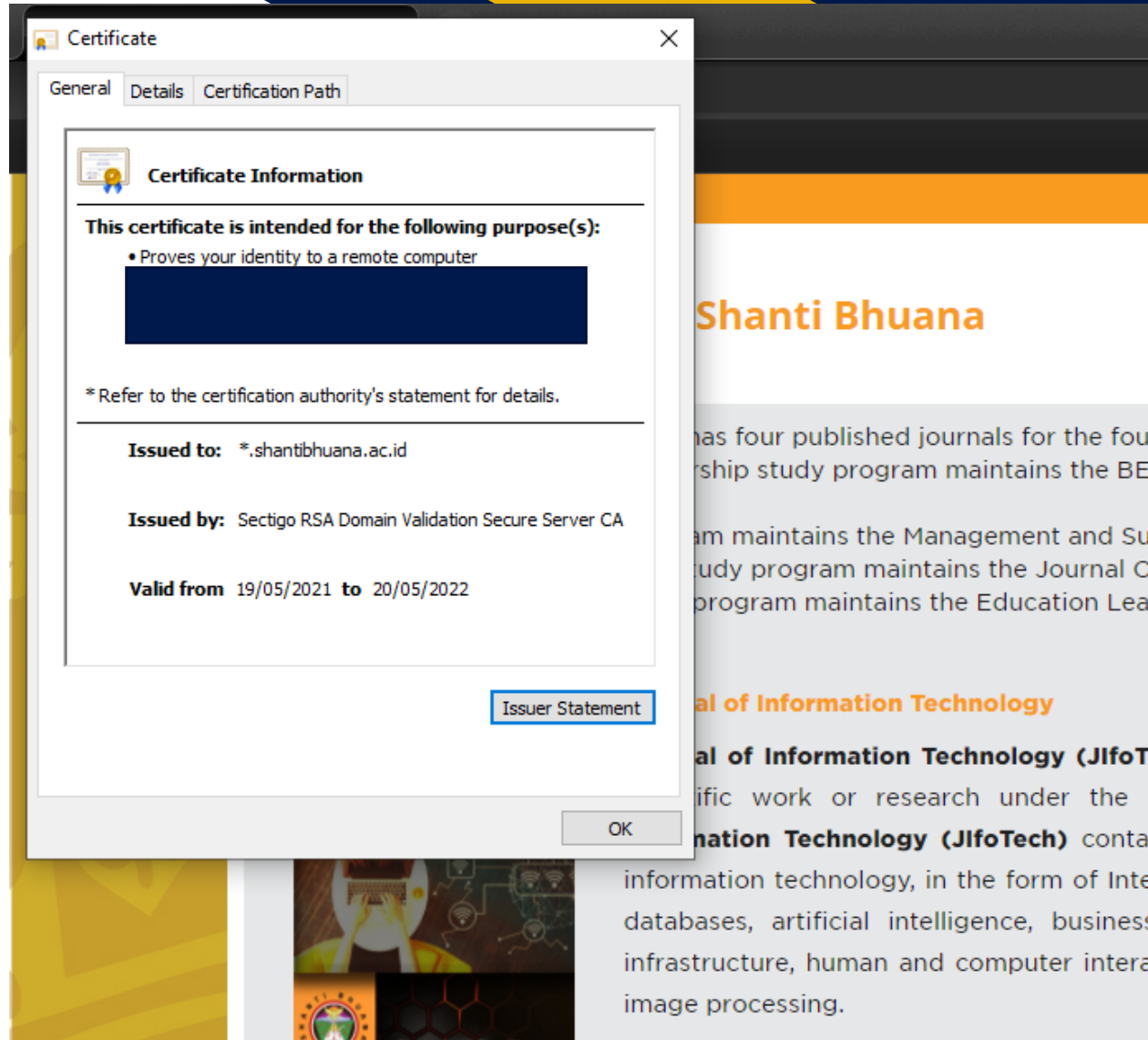
Lupa password? Belum memiliki akun? Daftar di sini.

Unduh Panduan tanya.sisterdiki@gmail.com

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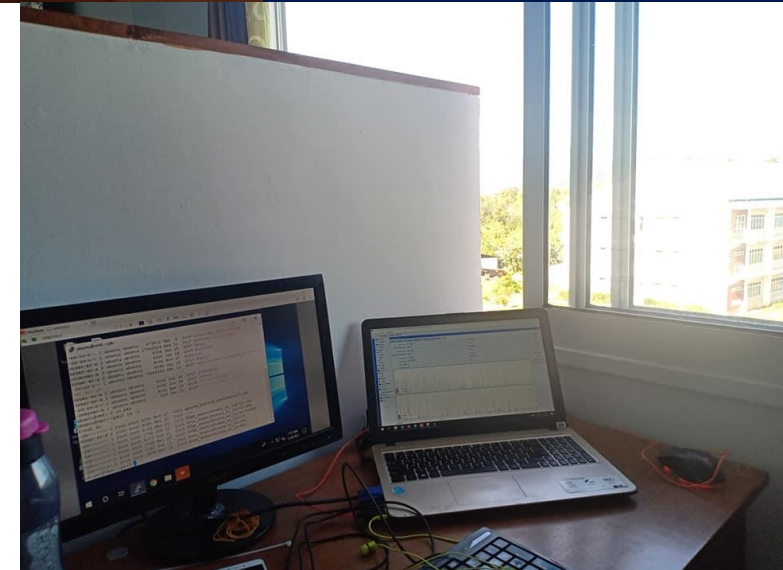
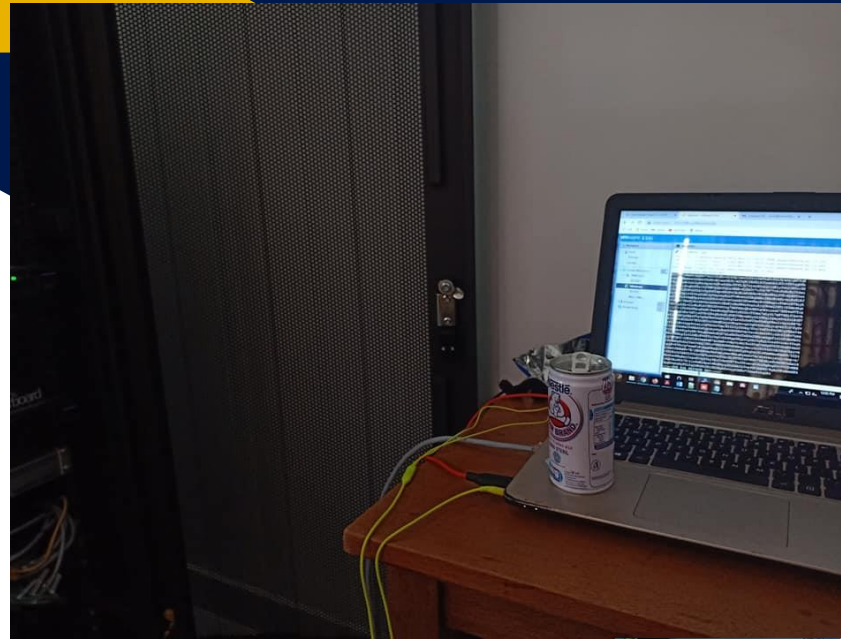
MASALAH JARINGAN KAMPUS DI ERA COVID-19



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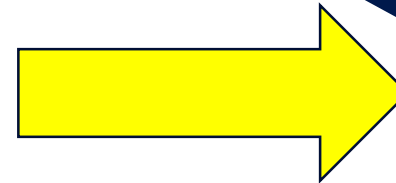
MASALAH JARINGAN KAMPUS DI ERA COVID-19

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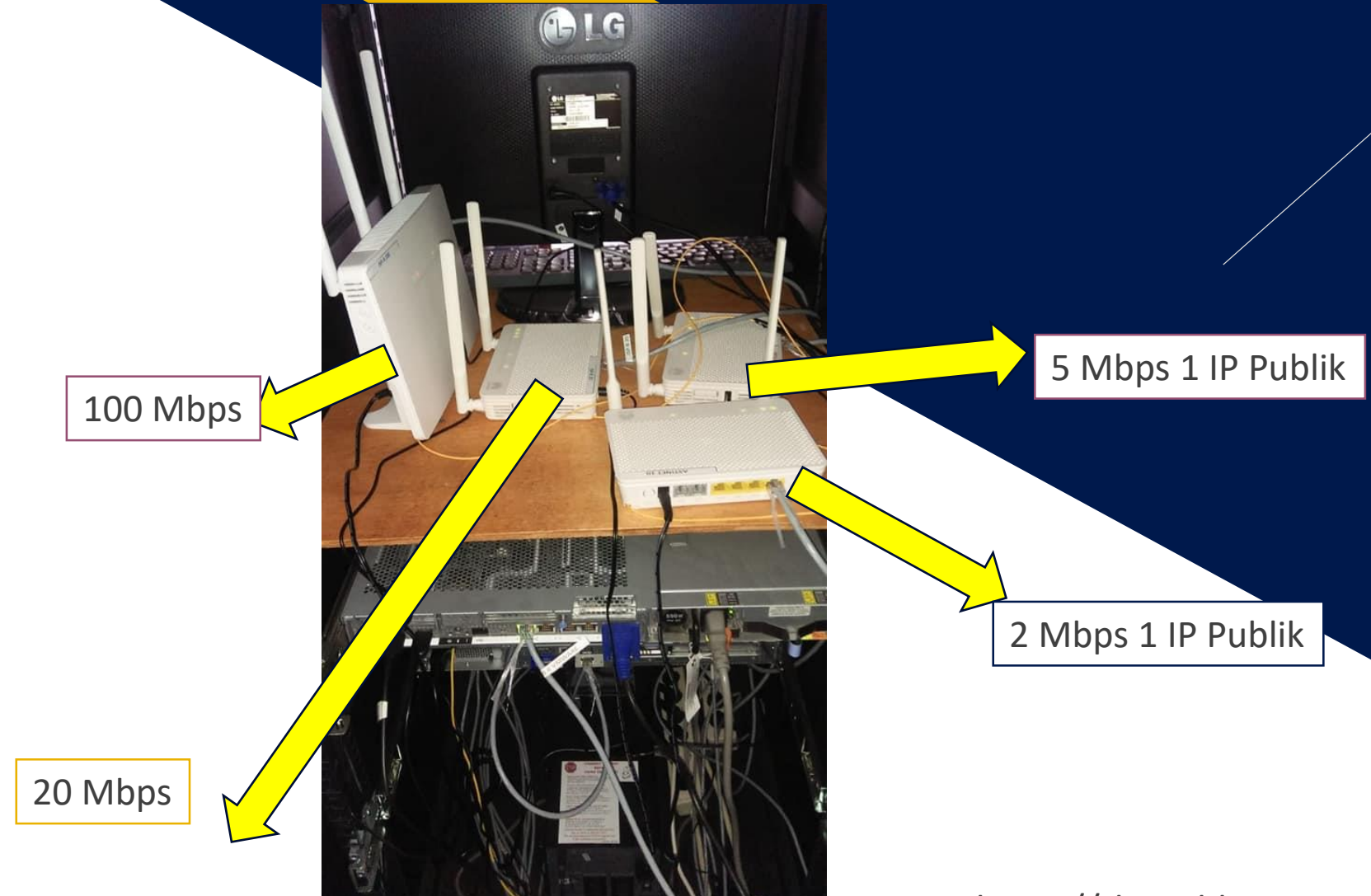
SOLUSI JARINGAN KAMPUS DI ERA COVID-19

Sebagai solusi kami menerapkan VMWare untuk menghemat biaya pengeluaran daripada harus membeli pc server yang jumlahnya puluhan. Tetapi dengan keterbatasan ip publik, kami dituntut untuk mengkonfigurasi jaringan agar dapat diterapkan proxy untuk terhubung publik hanya dengan 1 ip publik saja.



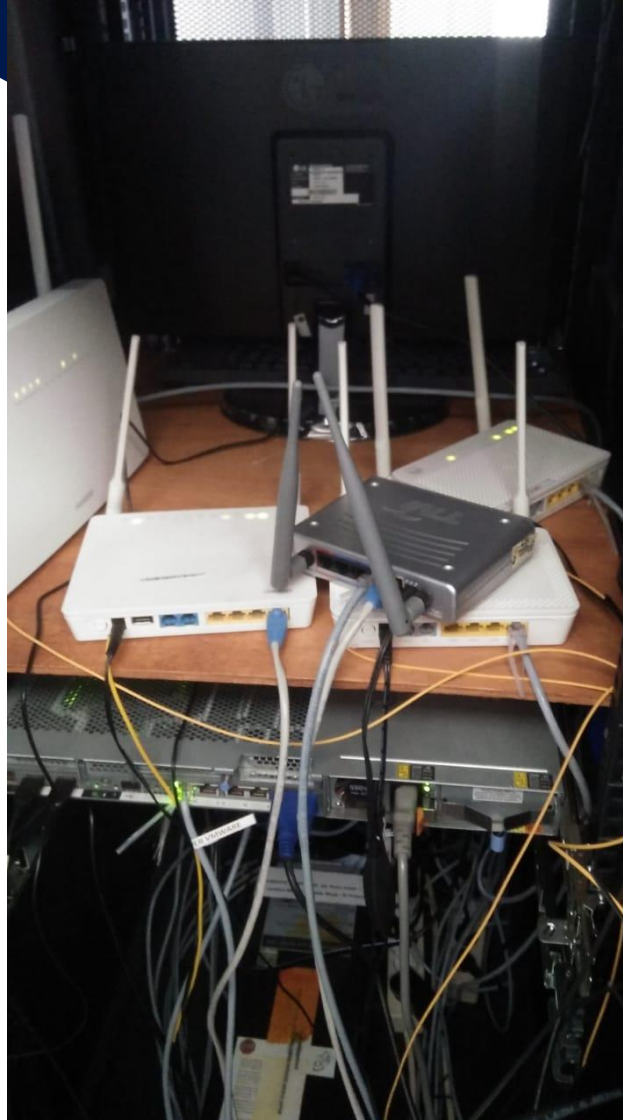
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Server VMWare ke
Jaringan A

Backbone
Jaringan B

Backbone
Jaringan A

Distribusi
Jaringan B

Disitribusi
Jaringan A





AP tiap
Ruangan



AP tiap
Ruangan



Perangkat Sebelum Konfigurasi



Gedung Kelas



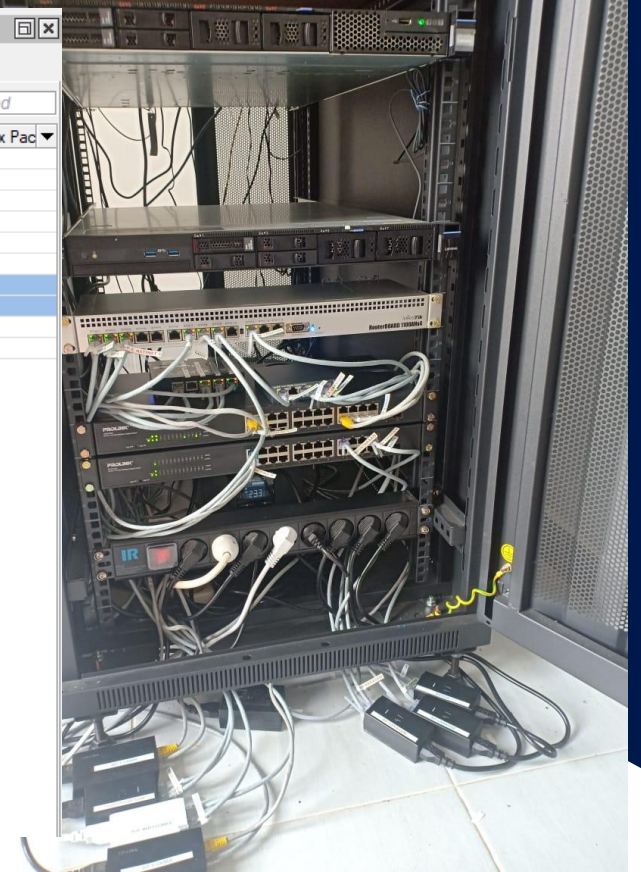
Server dan Router Backbone

Sisi MikroTik Jaringan A

The screenshot displays the MikroTik WinBox interface. On the left is a sidebar menu with options like Quick Set, CAPsMAN, Interfaces, Wireless, Bridge, PPP, Switch, Mesh, IP, MPLS, Routing, System, Queues, Files, Log, RADIUS, Tools, New Terminal, Dot1X, MetaROUTER, Partition, Make Supout.rtf, New WinBox, and Exit. The main window is titled 'Interface List' and shows a table of network interfaces. A 'DNS Static' window is open, displaying a list of static DNS entries. The table has columns for #, Name, Regexp, Address, and TTL (s). The entries are as follows:

#	Name	Regexp	Address	TTL (s)
0	huana.ac.id		1.201	1d
1	tibhuana.ac.id		1.202	1d
2	huana.ac.id		1.202	1d
3	huana.ac.id		1.202	1d
4	huana.ac.id		1.203	1d
5	huana.ac.id		1.204	1d
6	tibhuana.ac.id		1.204	1d
7	huana.ac.id		1.204	1d
8	tibhuana.ac.id		1.204	1d
9	tibhuana.ac.id		1.220	1d
10	tibhuana.ac.id		1.202	1d
11	tibhuana.ac.id		1.202	1d
12	tibhuana.ac.id		1.204	1d
13	tibhuana.ac.id		1.204	1d
14	huana.ac.id		1.201	1d
15	huana.ac.id		1.230	1d

The 'DNS Static' window also includes a 'Note Requests' section with input fields for 'Static' and 'Cache' settings. The 'Interface List' window shows a table with columns for Name, Type, Actual MTU, L2 MTU, Tx, Rx, Tx Packet (p/s), Rx Packet (p/s), FP Tx, FP Rx, FP Tx Packet (p/s), and FP Rx Packet (p/s). The interfaces listed are ether1, ether2, ether3, ether4, ether5, lvpn, and vpn.



Sisi MikroTik Jaringan A

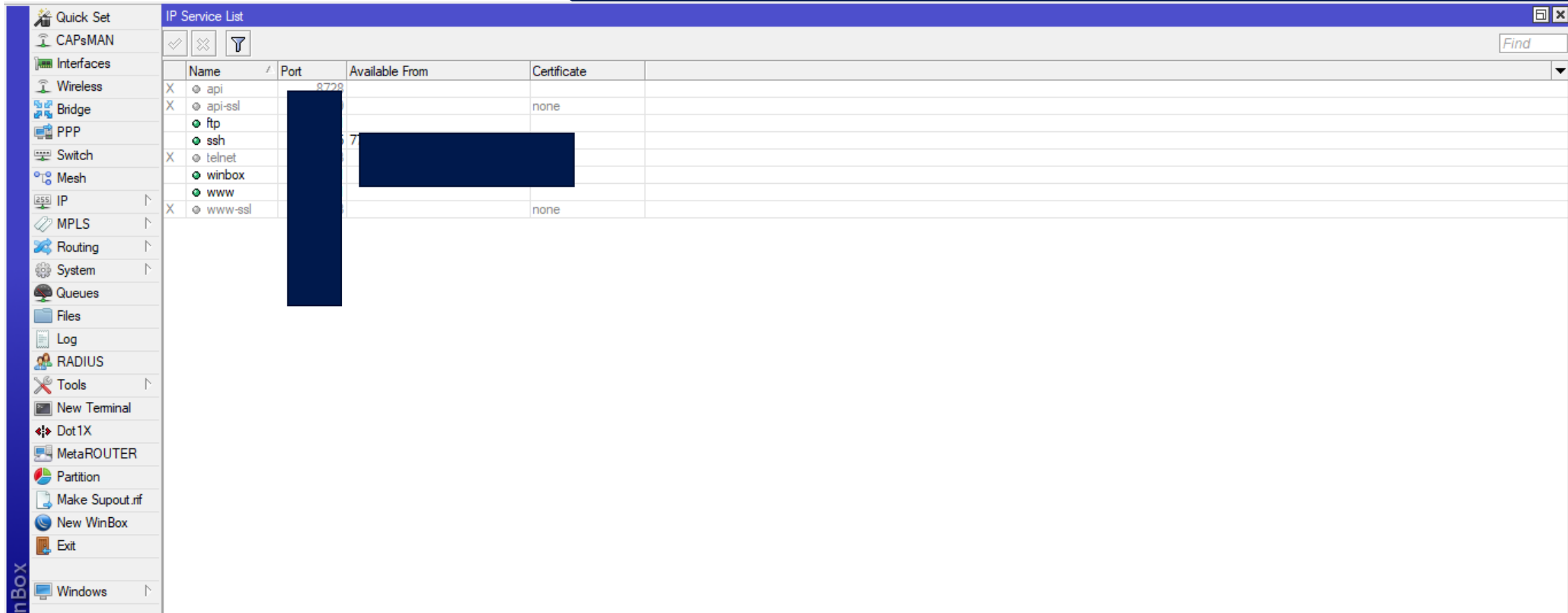
The screenshot displays the MikroTik WinBox interface. On the left is a sidebar with various configuration categories like Quick Set, CAPsMAN, Interfaces, Wireless, Bridge, PPP, Switch, Mesh, IP, MPLS, Routing, System, Queues, Files, Log, RADIUS, Tools, New Terminal, Dot1X, MetaROUTER, Partition, Make Supout.tif, New WinBox, and Exit. The main window is titled 'Interface List' and shows a table of network interfaces. An 'Address List' window is open, showing a table of IP addresses assigned to the interfaces.

Name	Type	MTU	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)
ether1						0 bps	0 bps	0	0	0 bps	0 bps
ether2						0 bps	0 bps	0	0	0 bps	0 bps
Remote Server Latihan						0 bps	0 bps	0	0	0 bps	0 bps
ether3						0 bps	0 bps	0	0	0 bps	0 bps
Astinet 10 Mbps						365.3 kbps	401.0 kbps	677	671	0 bps	0 bps
ether4 TELKOM						9.6 kbps	12.1 kbps	10	14	0 bps	0 bps
WIFI dan LAN											
ether5											

Address	Network	Interface
SERVER		ether3
WA		ether4 TELKOM
LAN		ether2
		ether5

4 items

Sisi MikroTik Jaringan A



The screenshot shows the MikroTik WinBox interface with the 'IP Service List' window open. The left sidebar contains a menu with various configuration options. The main window displays a table of IP services. The 'Name' column lists services like api, api-ssl, ftp, ssh, telnet, winbox, www, and www-ssl. The 'Port' column shows the default ports for these services. The 'Available From' column is currently empty. The 'Certificate' column shows 'none' for most services. There are some redaction boxes in the 'Port' and 'Available From' columns.

Name	Port	Available From	Certificate
X api	8728		
X api-ssl			none
ftp			
ssh	22		
X telnet	23		
winbox			
www			
X www-ssl			none

Sisi MikroTik Jaringan B

RouterOS WinBox

Session S

6 on RB1100AHx4 (arm)

Interface List

Interface	Name	Type	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)	FP Rx Packet (p/s)
::: ISP - A 125 Mbps Indihome Mix GGC												
R	ether1	Ethernet	1500	1592	1115.3 kbps	1198.7 kbps	290	320	1192.5 kbps	10.8 Mbps	397	1 272
::: ISP - B 20 Mbps Indihome												
	ether2	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0
::: ISP - C 5 Mbps Astinet												
R	ether3	Ethernet	1500	1592	162.0 kbps	12.6 kbps	18	14	132.5 kbps	13.6 kbps	23	22
	ether4	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0
	ether5	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0
	ether6	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0
::: WIFI OUTDOOR												
	ether7	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0
::: WIFI HOTSPOT LOGIN												
R	ether8	Ethernet	1500	1592	1195.1 kbps	1069.4 kbps	310	283	10.8 Mbps	1171.9 kbps	1 255	385
::: WIFI REKTORAT												
R	ether9	Ethernet	1500	1592	14.7 kbps	25.9 kbps	11	13	12.8 kbps	23.3 kbps	9	11
::: LAB KOMPUTER												
R	ether10	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0
R	ether11	Ethernet	1500	1592	0 bps	512 bps	0	1	0 bps	480 bps	0	1
	ether12	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0
	ether13	Ethernet	1500	1592	0 bps	0 bps	0	0	0 bps	0 bps	0	0

Interface <ether1>

General | Ethernet | Loop Protect | Overall Stats | Rx Stats | Tx Stats | Status | Traffic

Tx/Rx Rate: 1115.3 kbps / 1198.7 kbps

Tx/Rx Packet Rate: 290 p/s / 320 p/s

FP Tx/Rx Rate: 1192.5 kbps / 10.8 Mbps

FP Tx/Rx Packet Rate: 397 p/s / 1 272 p/s

Tx/Rx Bytes: 9.8 GiB / 47.0 GiB

Tx: 1115.3 kbps
Rx: 1198.7 kbps

Tx Packet: 290 p/s
Rx Packet: 320 p/s

enabled | running | slave | link ok

OK
Cancel
Apply
Disable
Comment
Torch
Cable Test
Blink
Reset MAC Address
Reset Counters

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Sisi MikroTik Jaringan B

RouterOS WinBox

Hotspot

Name	Session Time...	Idle Timeout	Shared U...	Rate Limit (x/tx)
default	1d 00:00:00	1d 00:00:00	1000	
dosen		none	100	45M/45M 0/0 0/0 0/0 6 40M/40M
mahasiswa		none	220	20M/20M 0/0 0/0 0/0 8 10M/10M
mhs		none	220	

Hotspot User Profile <dosen>

General

Name: dosen

Address Pool: hs-pool-8

Session Timeout:

Idle Timeout: none

Keepalive Timeout: 08:00:00

Status Autorefresh: 08:00:00

Shared Users: 100

Rate Limit (x/tx): 45M/45M 0/0 0/0 0/0 6 40M/40M

☒ Add MAC Cookie

MAC Cookie Timeout: 1d 00:00:00

Address List:

Incoming Filter:

Outgoing Filter:

Incoming Packet Mark: wifihotspoteth8-Upload

Outgoing Packet Mark: wifihotspoteth8-Download

Open Status Page: always

☐ Transparent Proxy

8 items (1)

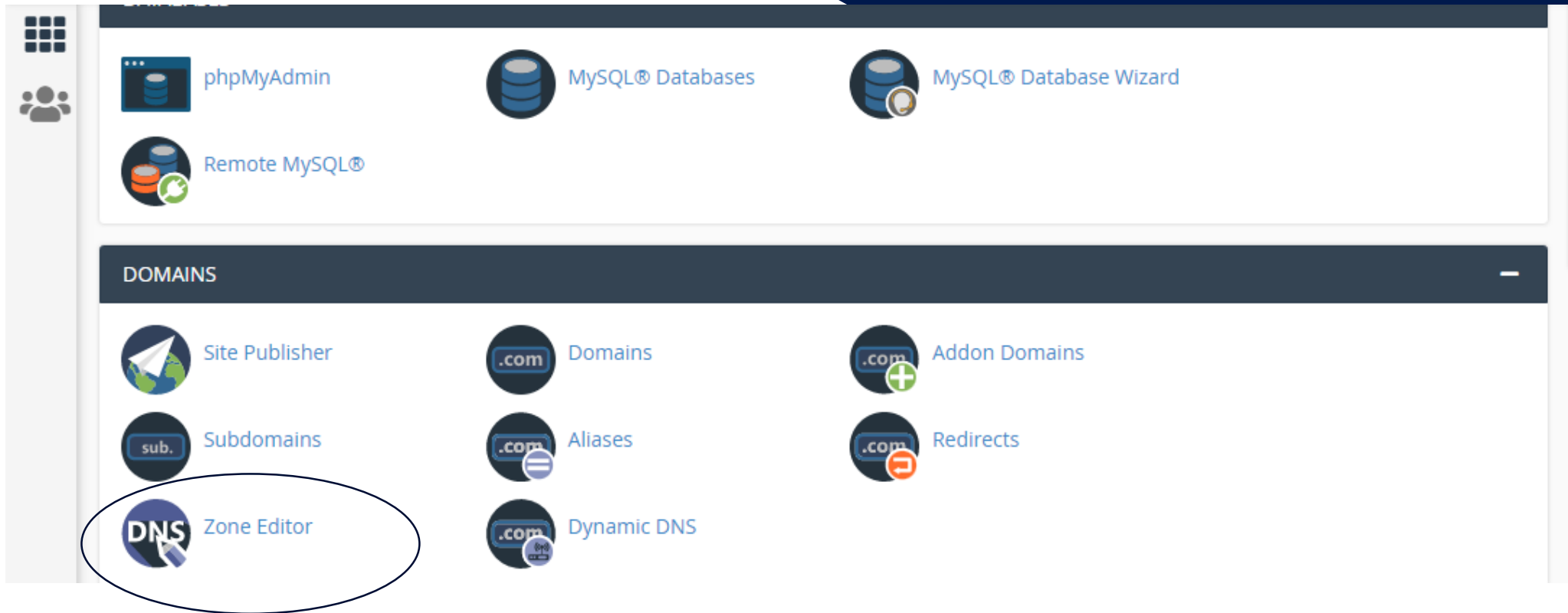
Sisi MikroTik Jaringan B

Queue List											
Simple Queues Interface Queues Queue Tree Queue Types											
+ - ✓ ✗ 📁 🔍 00 Reset Counters 00 Reset All Counters Find											
Name	Parent	Packet Marks	Priority	Limit At (b...	Max Limit ...	Avg. Rate	Queued Byt...	Bytes	Packets		
00-ICMP	global	icmp	1	512k	728k	176 bps	0 B	16.7 MiB	91 785		
01-DOWNLOAD	global		2			4.2 Mbps	0 B	46.1 GiB	43 160 259		
01-WIFIHOTSPOTDOSENSTAFF-dn	01-DOWNLOAD		8	75M	90M	3.7 Mbps	0 B	21.5 GiB	21 055 371		
WIFI REKTORAT DOSEN STAFF STAKEH...	01-WIFIHOTSPOTD...	wifihotspoteth8-Download	4	60M	68M	3.7 Mbps	0 B	21.5 GiB	21 055 371		
01-WIFI_MAHASISWA-dn	01-DOWNLOAD		4	18M	20M	0 bps	0 B	0 B	0		
1-WIFIHOTSPOT-dn	01-WIFI_MAHASIS...	wifihotspoteth7-Download	4	15M	20M	0 bps	0 B	0 B	0		
LABORATORIUM-UTAMA-TOTAL-dn	01-DOWNLOAD		7	20M	25M	0 bps	0 B	15.2 GiB	13 218 792		
LABORATORIUM_UTAMA_Download	LABORATORIUM-U...	LABORATORIUM_UTAMA_Download	7	19M	20M	0 bps	0 B	15.2 GiB	13 218 792		
PIMPINANRAPAT-TOTAL-dn	01-DOWNLOAD		3	59M	60M	530.0 kbps	0 B	9.4 GiB	8 884 737		
PIMPINAN_RUANGRAPAT_Download	PIMPINANRAPAT-T...	PIMPINAN_RUANGRAPAT_Download	3	54M	55M	530.0 kbps	0 B	9.4 GiB	8 884 737		
02-UPLOAD	global		2			724.6 kbps	0 B	9.6 GiB	22 859 959		
01-WIFIHOTSPOTDOSENSTAFF-up	02-UPLOAD		8	28M	50M	559.9 kbps	0 B	5.3 GiB	10 874 967		
WIFI REKTORAT DOSEN STAKEHOLDER	01-WIFIHOTSPOTD...	wifihotspoteth8-Upload	5	25M	45M	559.9 kbps	0 B	5.3 GiB	10 874 967		
01-WIFI_MAHASISWA-up	02-UPLOAD		4	2M	8M	0 bps	0 B	0 B	0		
1-WIFIHOTSPOT-up	01-WIFI_MAHASIS...	wifihotspoteth7-Upload	4	2M	8M	0 bps	0 B	0 B	0		
LABORATORIUM-UTAMA-TOTAL-up	02-UPLOAD		5	25M	31M	0 bps	0 B	2146.8 MiB	6 738 396		
LABORATORIUM_UTAMA_Upload	LABORATORIUM-U...	LABORATORIUM_UTAMA_Upload	5	23M	30M	0 bps	0 B	2146.8 MiB	6 738 396		
PIMPINANRAPAT-TOTAL-up	02-UPLOAD		3	38M	40M	164.6 kbps	0 B	2299.1 MiB	5 246 596		
PIMPINAN_RUANGRAPAT_Upload	PIMPINANRAPAT-T...	PIMPINAN_RUANGRAPAT_Upload	3	38M	40M	164.6 kbps	0 B	2299.1 MiB	5 246 596		

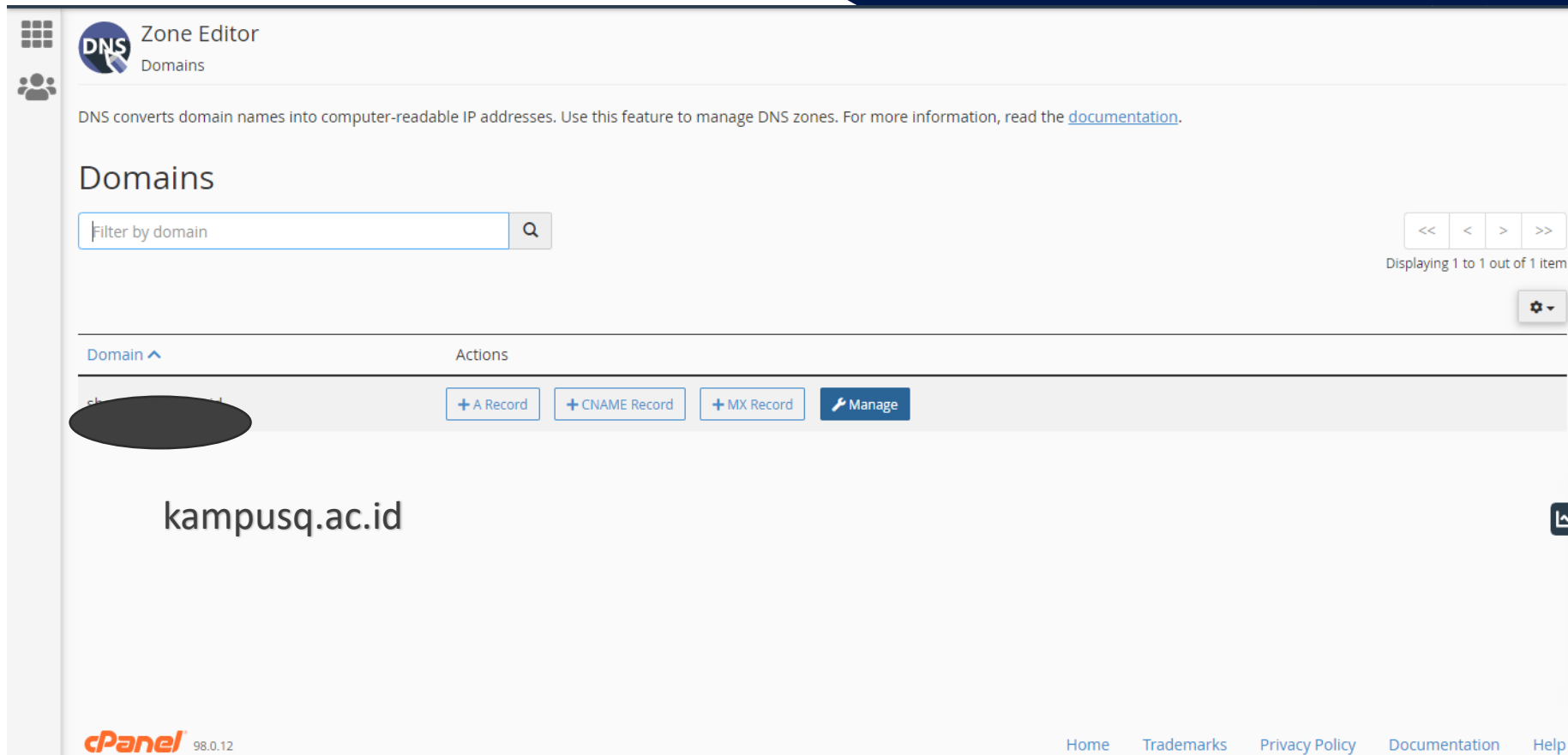
Interface List

Interface	Interface List	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
</									

Sisi CPANEL



Sisi CPANEL



The screenshot shows the cPanel Zone Editor interface. At the top, there's a header with a grid icon, a user icon, and the text "Zone Editor Domains". Below this is a descriptive paragraph about DNS. The main section is titled "Domains" and contains a search bar labeled "Filter by domain". To the right of the search bar are navigation buttons: "<<", "<", ">", and ">>". Below these buttons, it says "Displaying 1 to 1 out of 1 item". There's also a settings gear icon. A table with one row is visible, with a header "Domain ^" and "Actions". The domain listed is "kampusq.ac.id", which is partially obscured by a black oval. The actions for this domain are "+ A Record", "+ CNAME Record", "+ MX Record", and a "Manage" button. At the bottom left is the cPanel logo and version "98.0.12". At the bottom right are links for "Home", "Trademarks", "Privacy Policy", "Documentation", and "Help".

Zone Editor
Domains

DNS converts domain names into computer-readable IP addresses. Use this feature to manage DNS zones. For more information, read the [documentation](#).

Domains

Filter by domain

<< < > >>

Displaying 1 to 1 out of 1 item

⚙️

Domain ^	Actions
kampusq.ac.id	+ A Record + CNAME Record + MX Record Manage

kampusq.ac.id

cPanel 98.0.12

[Home](#) [Trademarks](#) [Privacy Policy](#) [Documentation](#) [Help](#)

Sisi CPANEL

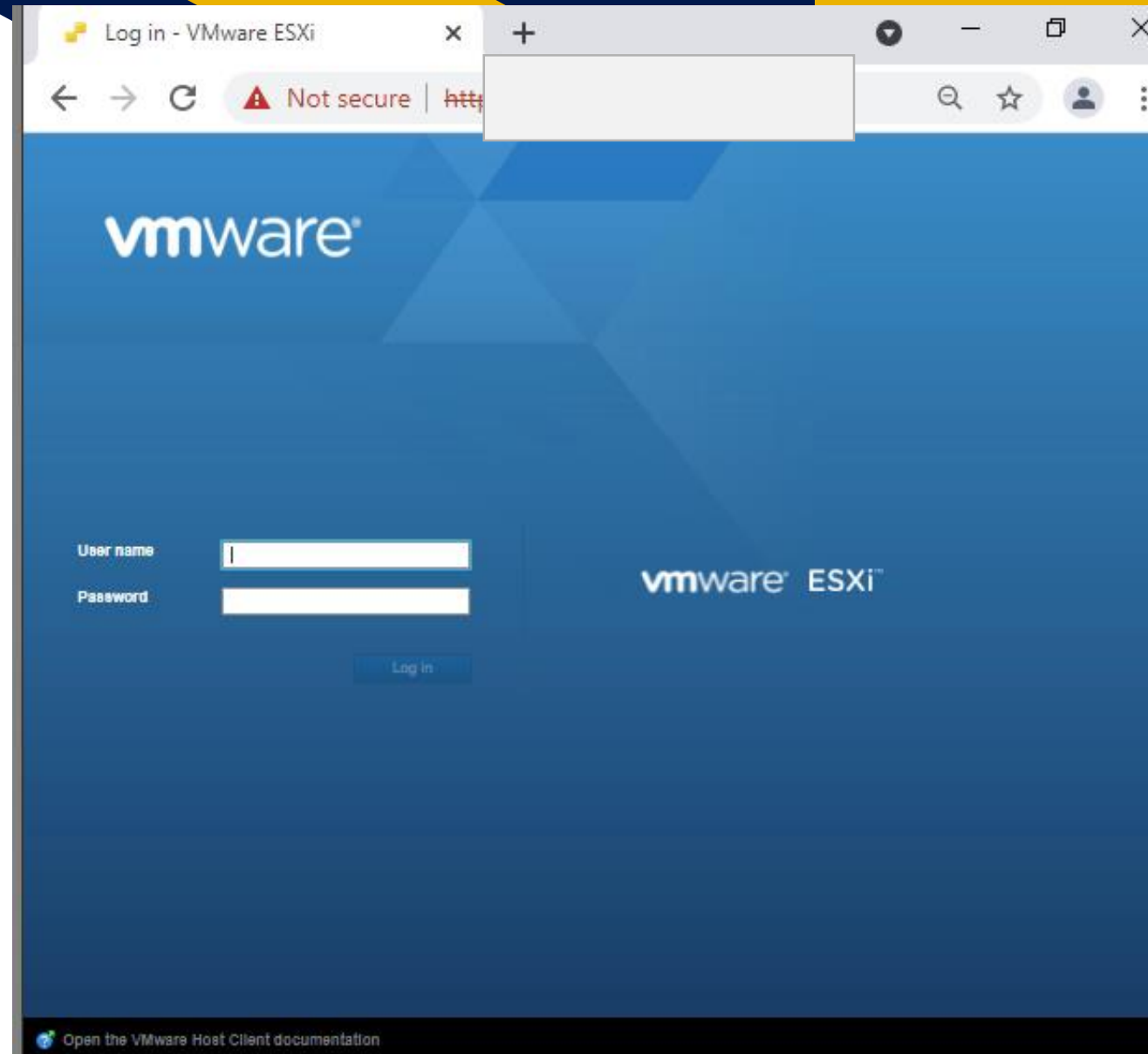
The screenshot displays a DNS management interface. On the left, a sidebar contains icons for a grid and a group of people. The main area features a table with the following records:

Record Name	IP Address	Type
ojsque.ac.id	14400	MX
ojsque.ac.id	14400	MX
ojsque.ac.id	14400	MX
ojsque.ac.id	14400	MX
ojsque.ac.id	14400	A
ojsque.ac.id	14400	A
ojsque.ac.id	14400	A
ojsque.ac.id	14400	A
latihan.ac.id	14400	A
latihan.ac.id	14400	A
latihan.ac.id	14400	A
sister.ac.id	14400	A
sister.ac.id	14400	A

A red box highlights the records with IP address 14400 and type A. Arrows point from the domain names **ojsque.ac.id**, **latihan.ac.id**, and **sister.ac.id** to these records. To the right of the table, the IP address **36.89.x.x/32** is displayed. On the far right, a sidebar contains a list of records, each with an **Edit** button and a **Delete** button.

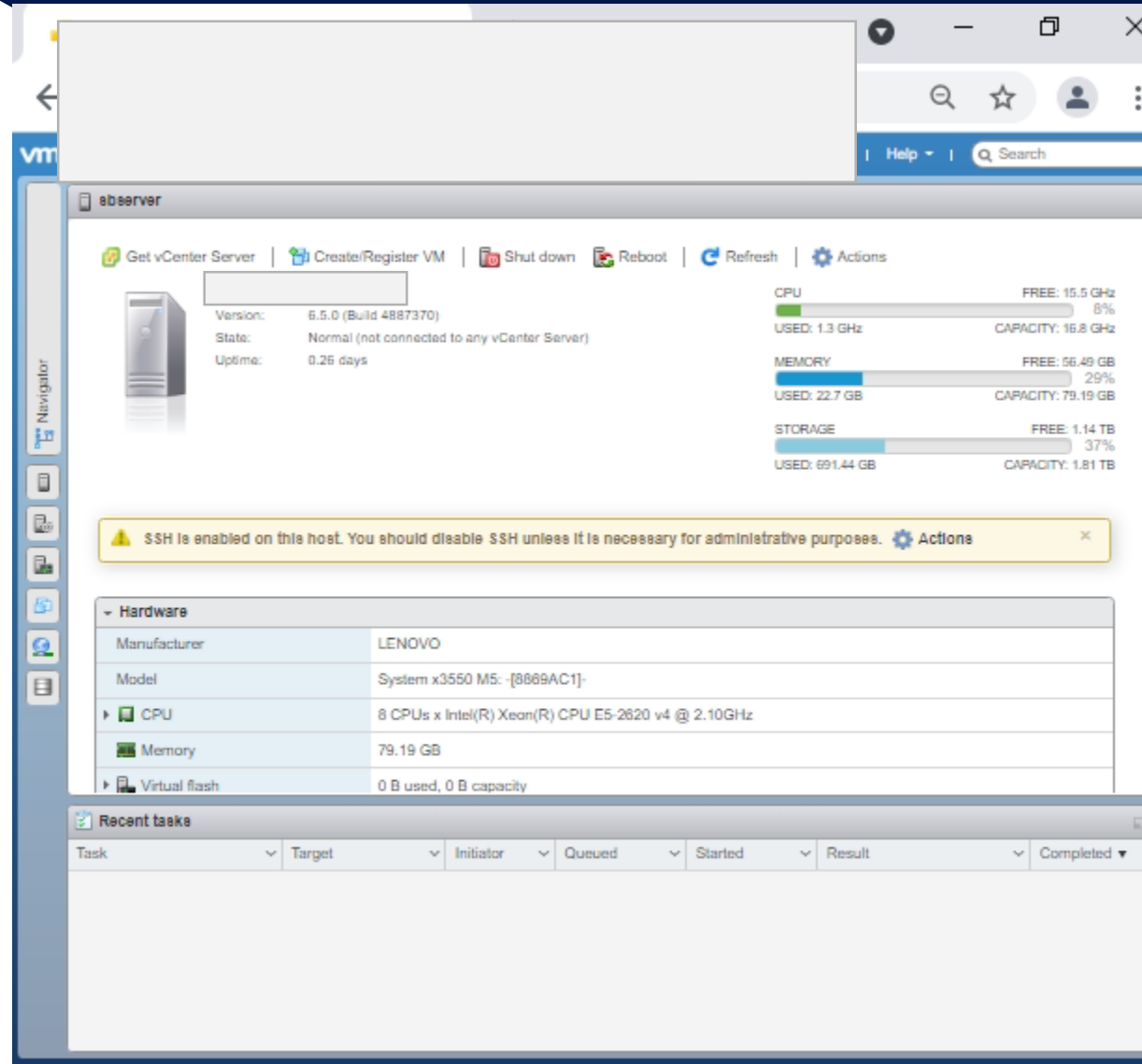
Sisi VMWare

Pada VM aplikasi terpasang dan sudah bisa diakses menggunakan IP address VM tersebut secara langsung.



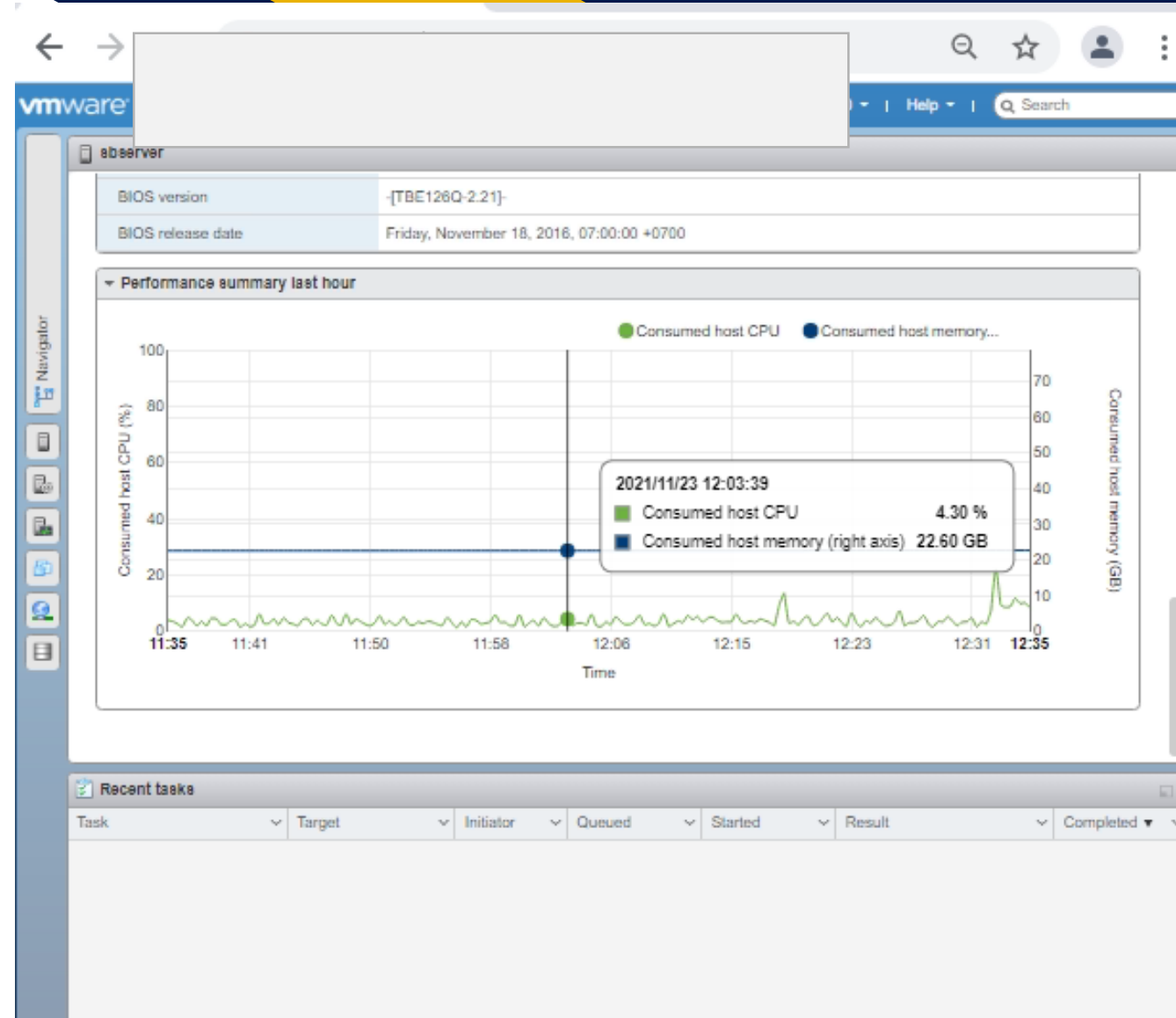
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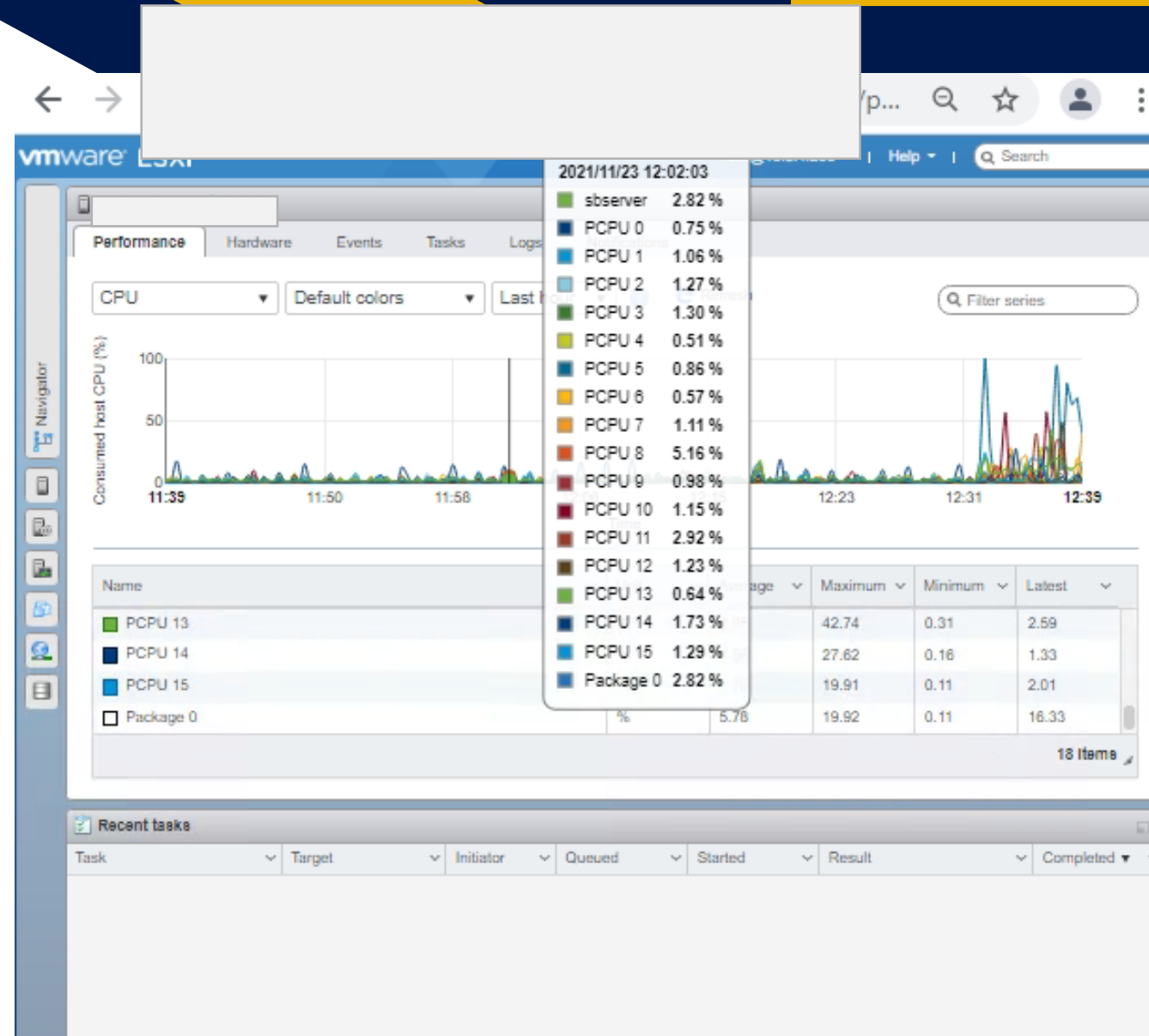
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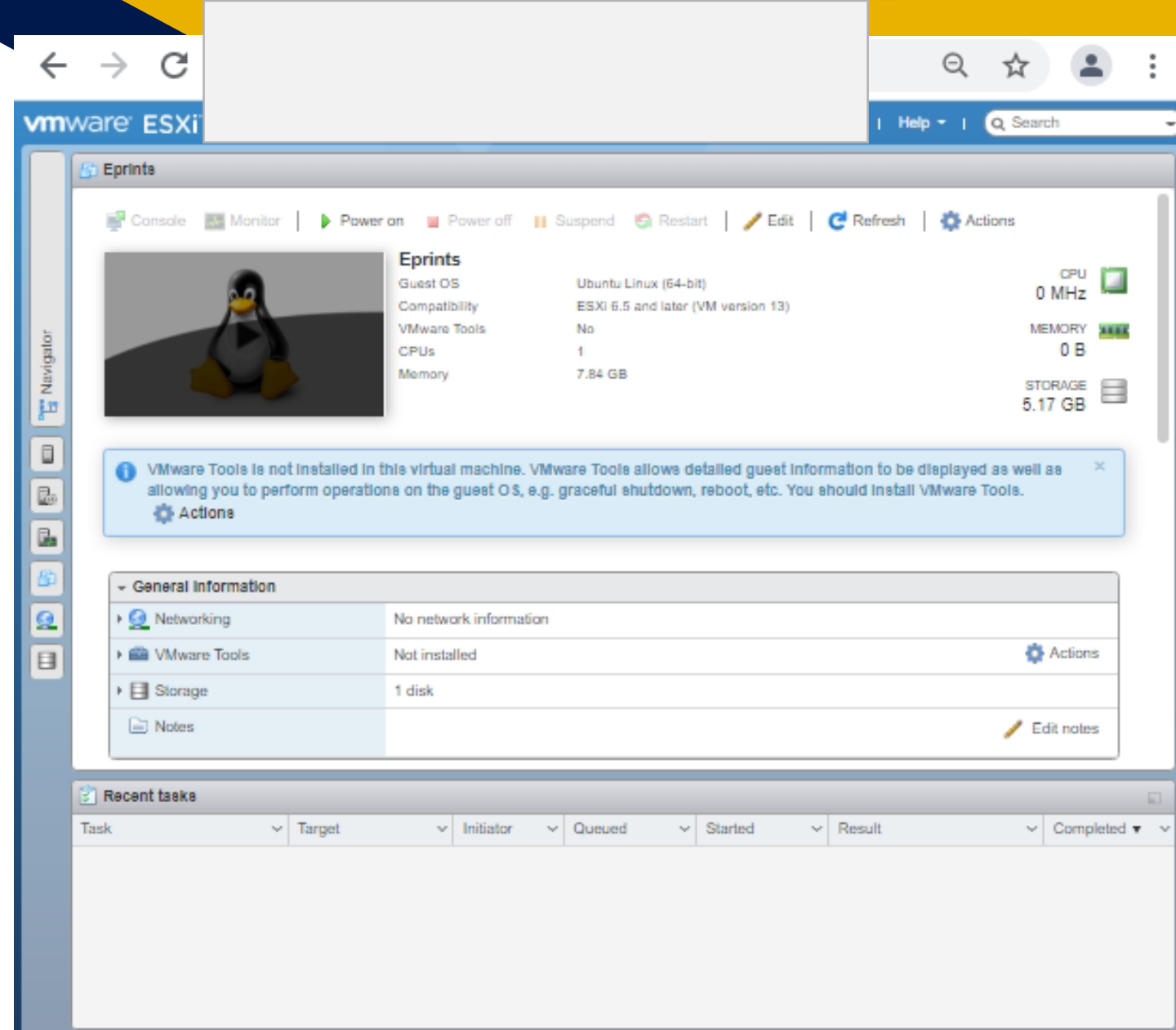
Sisi VMWare

Pada VM aplikasi terpasang dan sudah bisa diakses menggunakan IP address VM tersebut secara langsung.



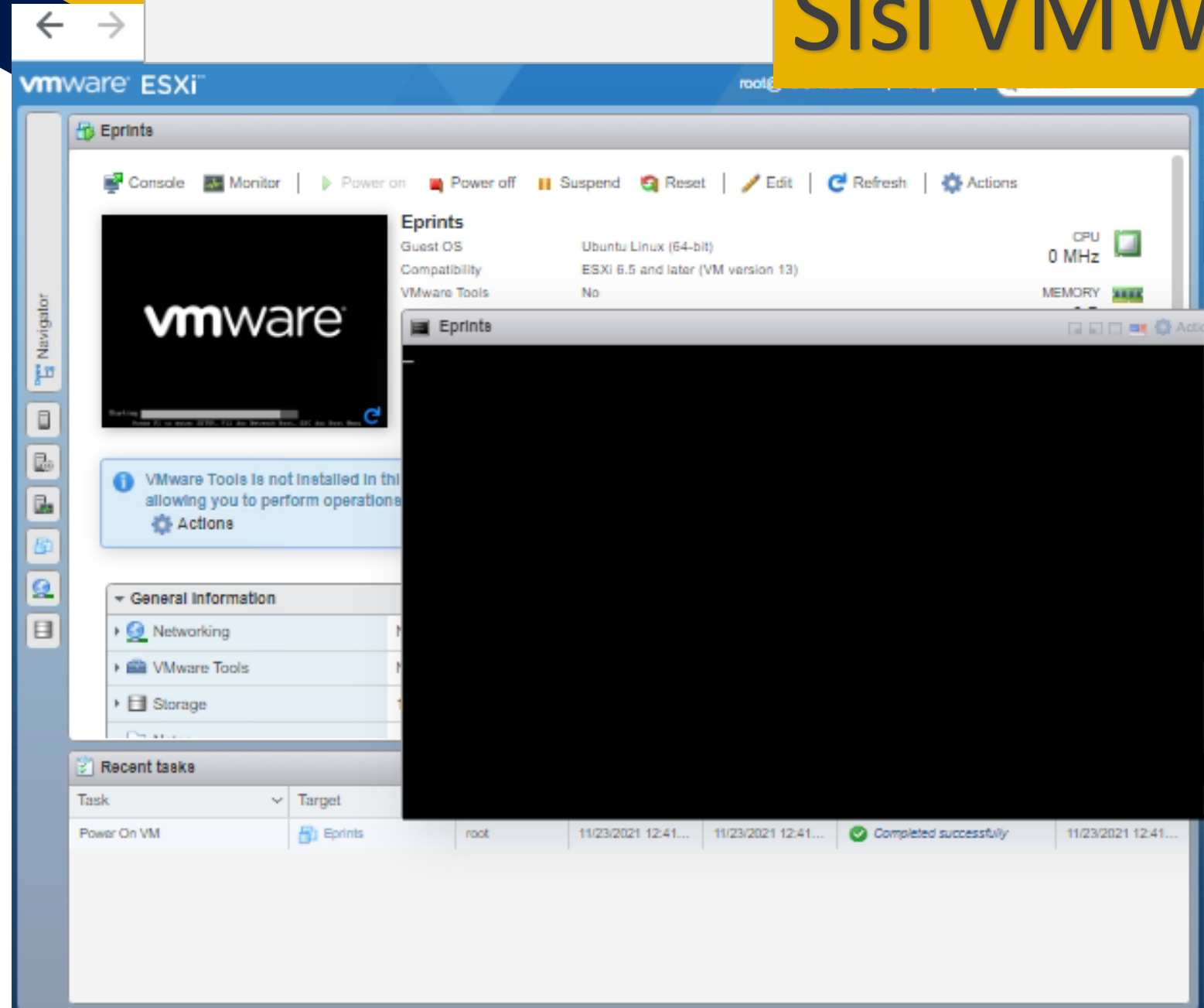
Sisi VMWare

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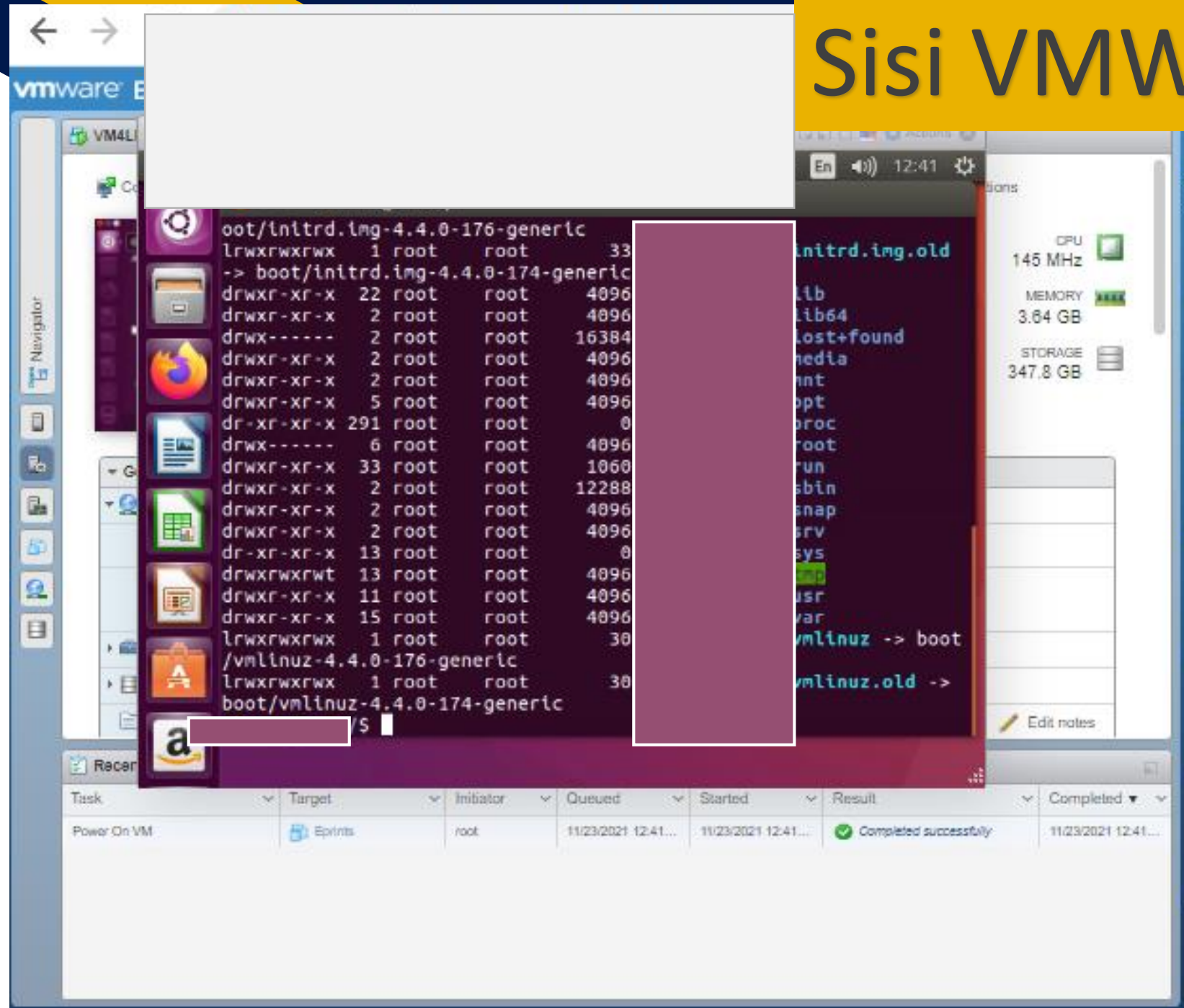
Sisi VMWare

Pada VM aplikasi terpasang dan sudah bisa diakses menggunakan IP address VM tersebut secara langsung.



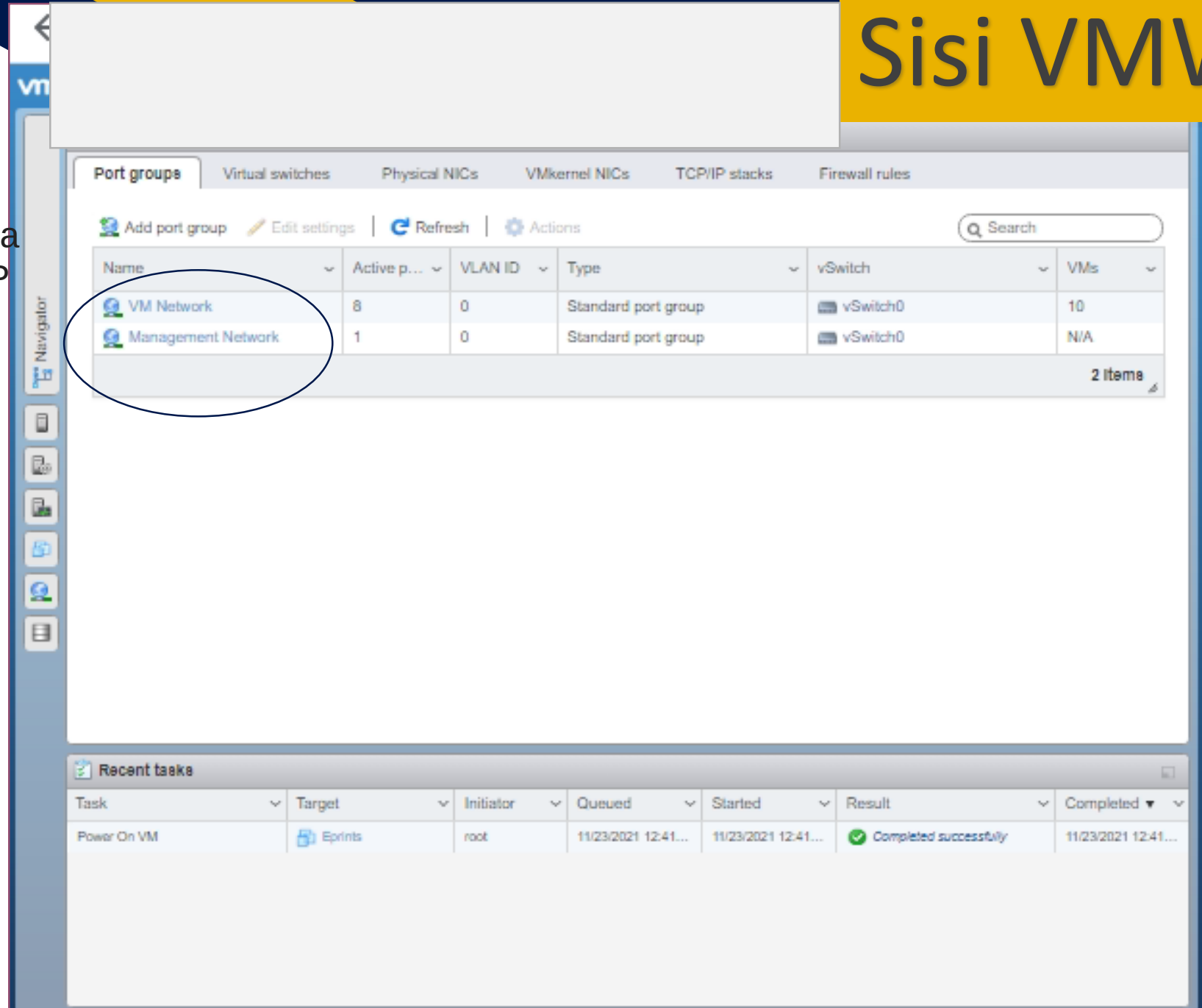
Sisi VMWare

Pada VM aplikasi terpasang dan sudah bisa diakses menggunakan IP address VM tersebut secara langsung.



Sisi VMWare

Pada VM aplikasi terpasang dan sudah bisa diakses menggunakan IP address VM tersebut secara langsung.



The screenshot displays the VMware vSphere Client interface. The 'Port groups' tab is selected, showing a table of network configurations. The 'VM Network' and 'Management Network' are listed. The 'VM Network' row is circled in blue. Below the table is a 'Recent tasks' section showing a 'Power On VM' task completed successfully.

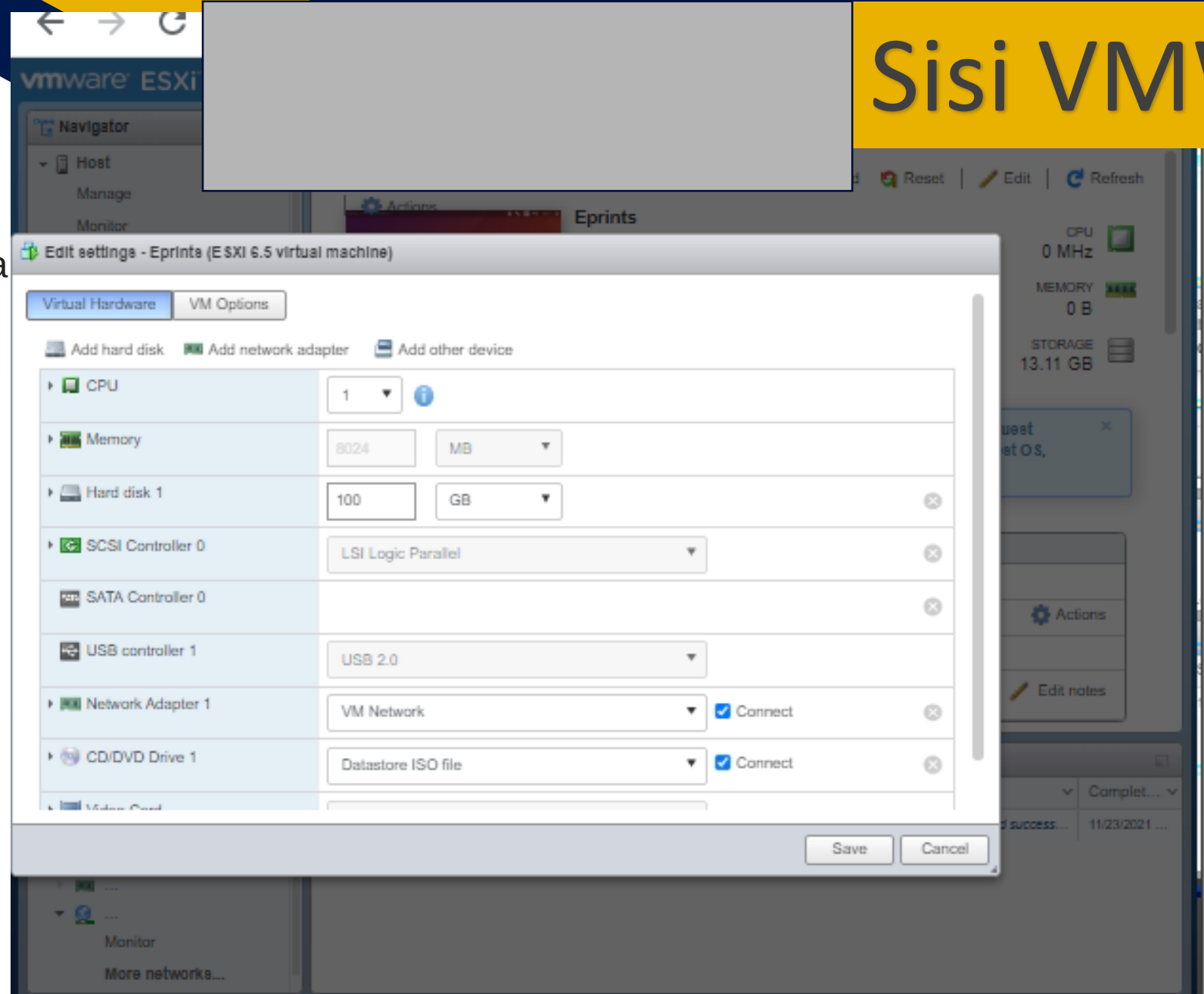
Name	Active p...	VLAN ID	Type	vSwitch	VMs
VM Network	8	0	Standard port group	vSwitch0	10
Management Network	1	0	Standard port group	vSwitch0	N/A

2 items

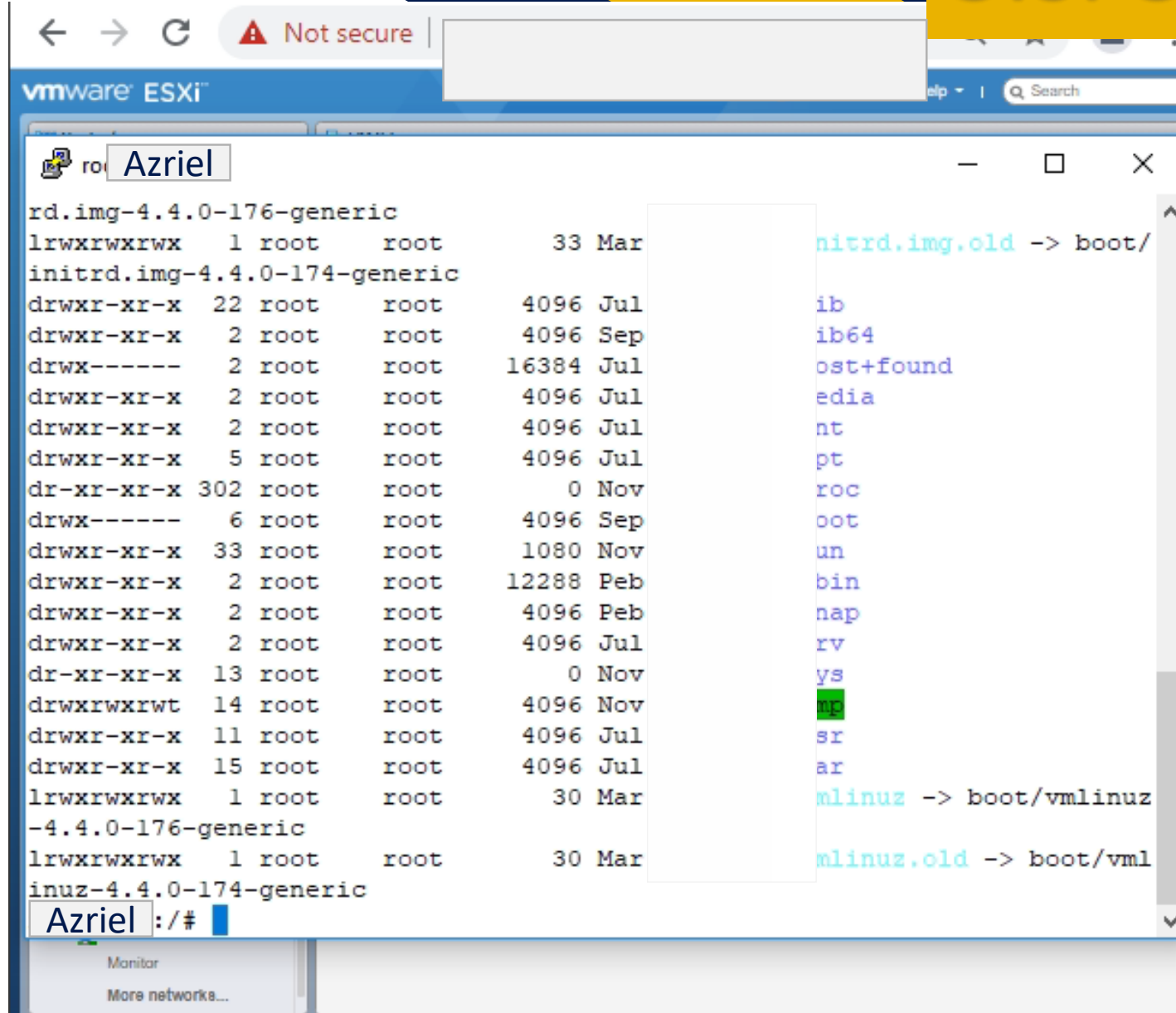
Task	Target	Initiator	Queued	Started	Result	Completed
Power On VM	Eprints	root	11/23/2021 12:41...	11/23/2021 12:41...	Completed successfully	11/23/2021 12:41...

Sisi VMWare

Pada VM aplikasi terpasang dan sudah bisa diakses menggunakan IP address VM tersebut secara langsung.



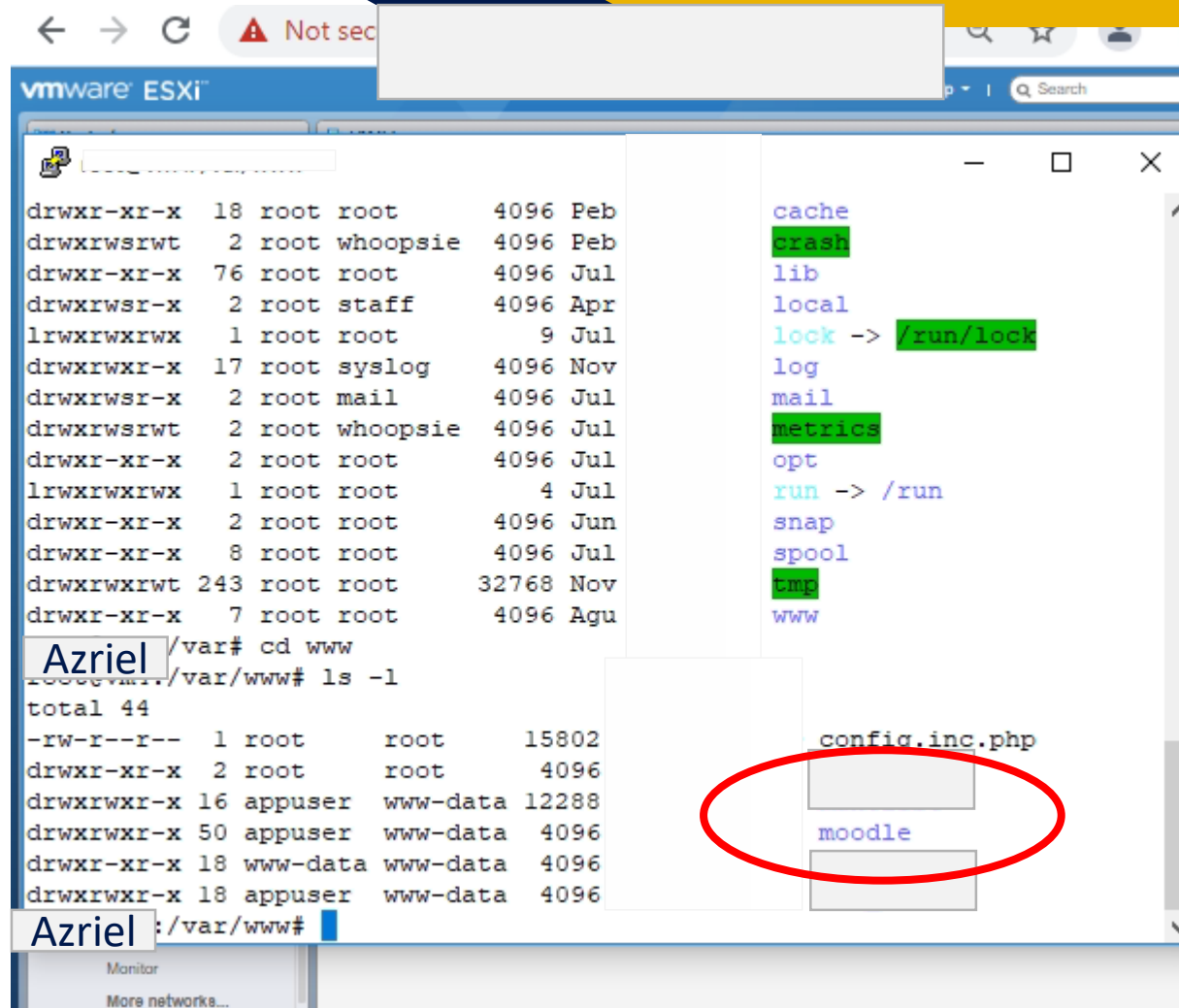
Sisi Server Ubuntu



```
rd.img-4.4.0-176-generic
lrwxrwxrwx  1 root  root    33 Mar      nitrd.img.old -> boot/
initrd.img-4.4.0-174-generic
drwxr-xr-x  22 root  root   4096 Jul      ib
drwxr-xr-x   2 root  root   4096 Sep      ib64
drwx-----  2 root  root  16384 Jul      ost+found
drwxr-xr-x   2 root  root   4096 Jul      edia
drwxr-xr-x   2 root  root   4096 Jul      nt
drwxr-xr-x   5 root  root   4096 Jul      pt
dr-xr-xr-x  302 root  root     0 Nov      roc
drwx-----   6 root  root   4096 Sep      oot
drwxr-xr-x   33 root  root  1080 Nov      un
drwxr-xr-x   2 root  root  12288 Feb      bin
drwxr-xr-x   2 root  root   4096 Feb      nap
drwxr-xr-x   2 root  root   4096 Jul      rv
dr-xr-xr-x   13 root  root     0 Nov      ys
drwxrwxrwt   14 root  root   4096 Nov      ng
drwxr-xr-x   11 root  root   4096 Jul      sr
drwxr-xr-x   15 root  root   4096 Jul      ar
lrwxrwxrwx  1 root  root     30 Mar      mlinuz -> boot/vmlinuz
-4.4.0-176-generic
lrwxrwxrwx  1 root  root     30 Mar      mlinuz.old -> boot/vml
inuz-4.4.0-174-generic
Azriel :/#
```

Masuk ke dalam folder `/var/www` dan buat direktori “home” untuk web baru. Mis: `/var/www/aplikasique`

Sisi Server Ubuntu



```
drwxr-xr-x 18 root root      4096 Feb
drwxrwsrwt  2 root whoopsie 4096 Feb
drwxr-xr-x 76 root root      4096 Jul
drwxrwsr-x  2 root staff     4096 Apr
lrwxrwxrwx  1 root root           9 Jul
drwxrwxr-x 17 root syslog    4096 Nov
drwxrwsr-x  2 root mail      4096 Jul
drwxrwsrwt  2 root whoopsie 4096 Jul
drwxr-xr-x  2 root root      4096 Jul
lrwxrwxrwx  1 root root           4 Jul
drwxr-xr-x  2 root root      4096 Jun
drwxr-xr-x  8 root root      4096 Jul
drwxrwxrwt 243 root root     32768 Nov
drwxr-xr-x  7 root root      4096 Agu

/var# cd www
/var/www# ls -l
total 44
-rw-r--r--  1 root      root      15802
drwxr-xr-x  2 root      root      4096
drwxrwxr-x 16 appuser  www-data 12288
drwxrwxr-x 50 appuser  www-data 4096
drwxr-xr-x 18 www-data www-data 4096
drwxrwxr-x 18 appuser  www-data 4096

/var/www#
```

cache
crash
lib
local
lock -> /run/lock
log
mail
metrics
opt
run -> /run
snap
spool
tmp
www

config.inc.php
moodle

Masuk ke dalam folder `/var/www` dan buat direktori “home” untuk web baru. Mis: `/var/www/moodle`

Sisi Server Ubuntu

```
drwxr-xr-x 2 root root 4096 Ma
drwxr-xr-x 3 root root 4096 Ju
lrwxrwxrwx 1 root root 23 Ju
trgb
-rw-r--r-- 1 root root 4942 Ju
drwxr-xr-x 2 root root 4096 Se
drwxr-xr-x 11 root root 4096 Ju
drwxr-xr-x 5 root root 4096 Ju
drwxr-xr-x 2 root root 4096 Ju
-rw-r--r-- 1 root root 477 Ju
Azriel /etc# cd apache2
Azriel /etc/apache2# ls -l
total 84
-rw-r--r-- 1 root root 7115
drwxr-xr-x 2 root root 4096
drwxr-xr-x 2 root root 4096
-rw-r--r-- 1 root root 1782
-rw-r--r-- 1 root root 31063
drwxr-xr-x 2 root root 16384
drwxr-xr-x 2 root root 4096
-rw-r--r-- 1 root root 342
drwxr-xr-x 2 root root 4096
drwxr-xr-x 2 root root 4096
Azriel /etc/apache2#
```

vim
vmware-tools
vtrgb -> /etc/alternatives/v
wgetrc
wpa_supplicant
X11
xdg
xml
zsh_command_not_found

apache2.conf
conf-available
conf-enabled
envvars
magic
mods-available
mods-enabled
ports.conf
sites-available
sites-enabled

Masuk ke folder web
server misal
/apache2/sites-available

Sisi Server Ubuntu

```
<VirtualHost *:80>
    ServerName      aplikasique.ac.id

    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/aplikasique

    # Available loglevels: trace8, ..., tracel, debug, info, notice,
warn,
    # error, crit, alert, emerg.
    # It is also possible to configure the loglevel for particular
    # modules, e.g.
    #LogLevel info ssl:warn

    ErrorLog ${APACHE_LOG_DIR} aqe .error.log
    CustomLog ${APACHE_LOG_DIR} aqe .access.log combined

    # For most configuration files from conf-available/, which are
    # enabled or disabled at a global level, it is possible to
    # include a line for only one particular virtual host. For exampl
e the
    # following line enables the CGI configuration for this host only
    # after it has been globally disabled with "a2disconf".
```

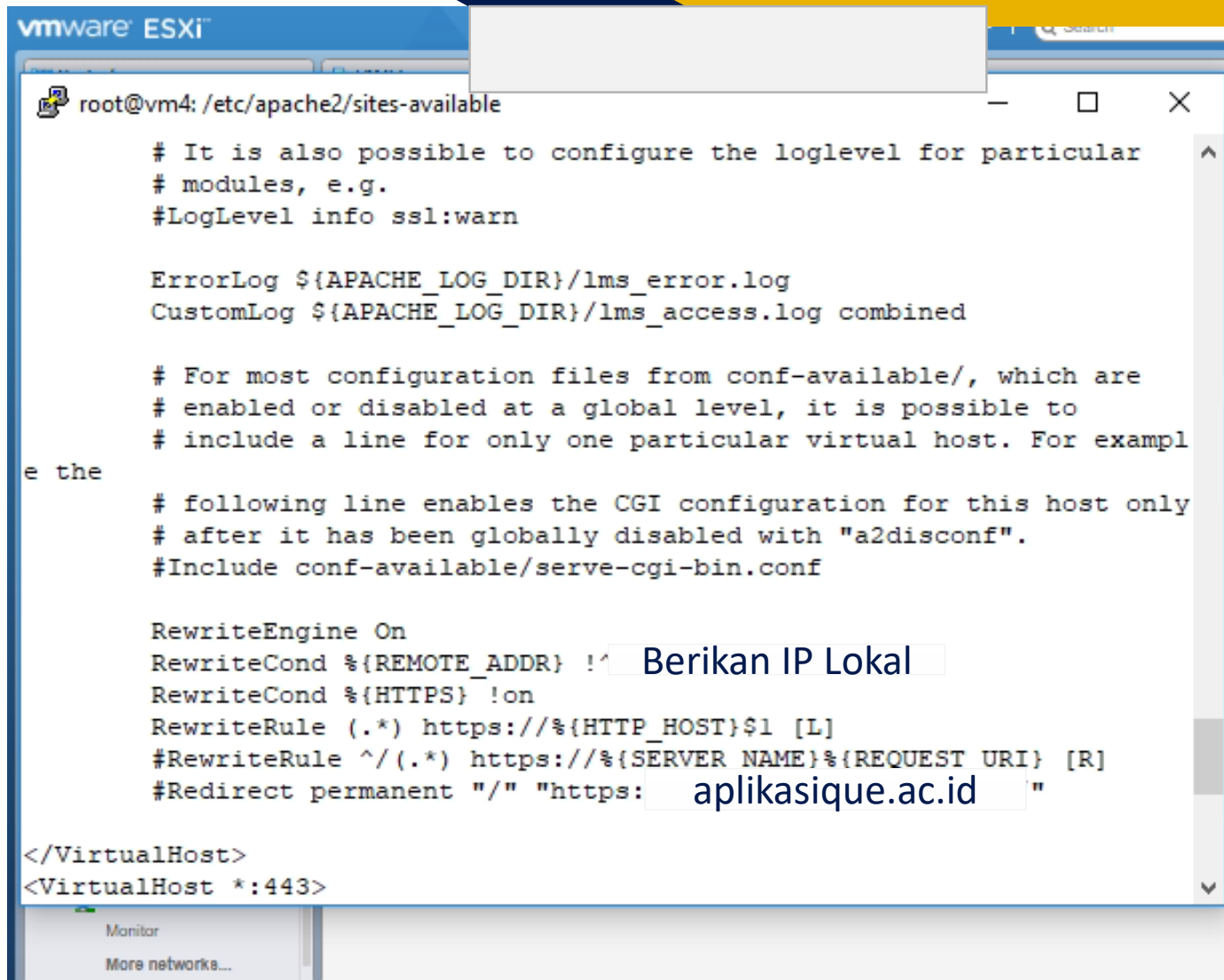
User dapat membuat file sesuai nama aplikasi kemudian berisi

1. *ServerName*
2. *VirtualHost *:80*
3. *ErrorLog*
4. *CustomLog*
5. *ProxyPass*
6. *ProxyPassReversed*

Dan jangan lupa

7. *SSLCertificateFile*

Sisi Server Ubuntu



```
root@vm4: /etc/apache2/sites-available

# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/lms_error.log
CustomLog ${APACHE_LOG_DIR}/lms_access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For exampl
e the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf

RewriteEngine On
RewriteCond %{REMOTE_ADDR} != Berikan IP Lokal
RewriteCond %{HTTPS} !on
RewriteRule (.*?) https://%{HTTP_HOST}$1 [L]
#RewriteRule ^/(.*) https://%{SERVER_NAME}%{REQUEST_URI} [R]
#Redirect permanent "/" "https: aplikasique.ac.id"

</VirtualHost>
<VirtualHost *:443>
```

User dapat membuat file sesuai nama aplikasi kemudian berisi

1. ServerName
2. VirtualHost *:80
3. ErrorLog
4. CustomLog
5. ProxyPass
6. ProxyPassReversed

Dan jangan lupa

7. SSLCertificateFile

Sisi Server Ubuntu

```
</VirtualHost>
<VirtualHost *:443>
    ServerName : aplikasi.ac.id
    ServerAlias : aplikasi.ac.id
    DocumentRoot var/www/aplikasique

    ErrorLog ${APACHE_LOG_DIR}/lms_error.log
    CustomLog ${APACHE_LOG_DIR}/lms_access.log combined

    SSLEngine On

    SSLCertificateFile /home/ubuntu/pki/STAR_aplikasique_ac_id.crt
    SSLCertificateKeyFile /home/ubuntu/pki/star_aplikasique_ac_id.ke
y
# SSLCertificateChainFile /home/ubuntu/pki/STAR_aplikasique_ac_id
.ca-bundle
    SSLCertificateChainFile /home/ubuntu/pki/apache_bundle_Kodeunik
67.crt

    BrowserMatch ".*MSIE.*" nokeepalive ssl-unclean-shutdown downgrad
e-1.0 force-response-1.0
    SSLCipherSuite ALL:!ADH:!EXPORT56:RC4+RSA:+HIGH:+MEDIUM:+LOW:+SSL
```

Azriel

```
sudo apache2ctl configtest
```

Khusus kasus global DNS bisa memakan waktu 1-3 hari.

“MikroTik sangat membantu untuk mengalokasikan jaringan, manajemen bandwidth dan membagi jalur” publik dan lokal dengan proxy dari VMWare dan Server Virtual di dalamnya. “