KEAMANAN JARINGAN KOMPUTER

(REPORT: NETWORK MAPPING)

NAMA: ERDA JULIAN LESI

NIM: 09011181419065

KELAS: SK6B

DOSEN PENGAMPUH: DERIS STIAWAN, M.T., PH.D.

JURUSAN SISTEM KOMPUTER

FAKULTAS ILMU KOMPUTER

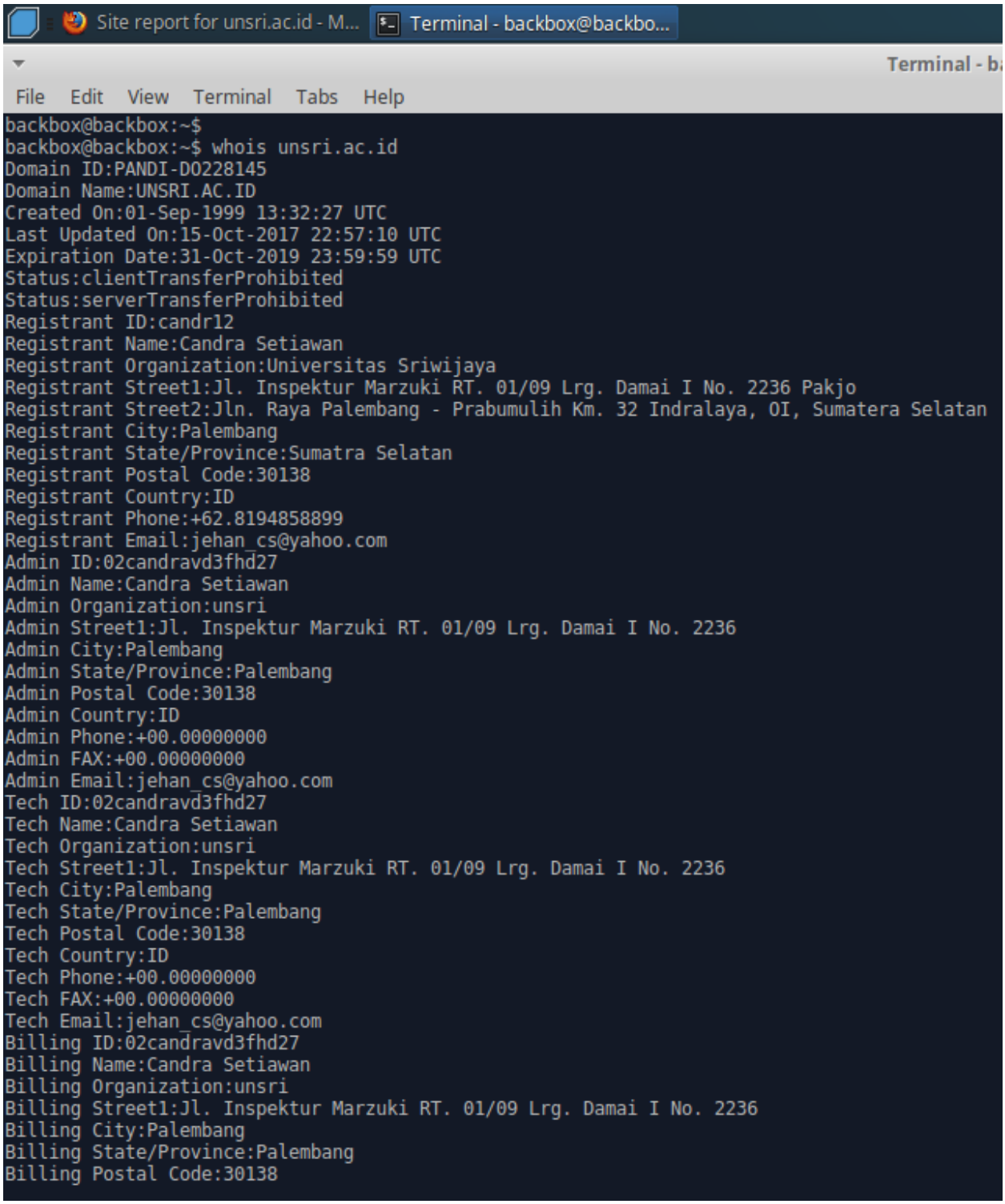
UNIVERSITAS SRIWIJAYA

2018

NMAP (Network Mapping)

Target: unsri.ac.id

1. FOOT PRINTING
   a. Who is?



Mencari / mengumpulkan informasi yang berkaitan dengan target yang akan di serang. Dari hasil diatas ada beberapa informasi penting yang bisa di manfaatkan, di antaranya waktu expired domain. Ada juga nama penanggung jawab pendaftar domain, beserta alamat lengkapnya. Bahkan terdapat nomor handphone. Informasi diatas didapat dari terminal, bisa juga diakses di https://www.whois.com/whois/.

b. Whatweb

```
http://unsri.ac.id [302] Cookies[PHPSESSID],
 Email[yadiutama@unsri.ac.id],
 HTTPServer[nginx],
 IP[103.241.4.11],
 JQuery[1.2.6],
 Meta-Author[yadiutama@unsri.ac.id],
 PHP[5.3.10-1ubuntu3.25],
 PasswordField[password],
 RedirectLocation[http://www.unsri.ac.id/],
 Script[text/javascript],
 Title[.:: Halaman Utama | Universitas Sriwijaya - Indralaya, Sumatera Selatan],
 X-Powered-By[PHP/5.3.10-1ubuntu3.25],
 nginx
```

Dari hasil scanning menggunakan tool Whatweb, di dapat beberapa informasi penting, di antaranya web server yang digunakanan dalah nginx dengan IP 103.241.4.11, versi php yang di gunakan 5.3.10- lubuntu3.25 dan terdapat password.

c. Netcraft

Background

Site title	.:: Halaman Utama | Universitas Sriwijaya - Indralaya, Sumatera Selatan	**Date first seen**	June 2000
Site rank		**Primary language**	Indonesian
Description	*Not Present*		
Keywords	*Not Present*		
Netcraft Risk Rating [FAQ]	0/10		

Network

Site	http://unsri.ac.id	**Netblock Owner**	Universitas Sriwijaya
Domain	unsri.ac.id	**Nameserver**	ns1.unsri.ac.id
IP address	103.241.4.11	**DNS admin**	admin@unsri.ac.id
IPv6 address	2001:df1:7000:0:0:0:0:a2	**Reverse DNS**	ns4.unsri.ac.id
Domain registrar	pandi.or.id	**Nameserver organisation**	whois.pandi.or.id
Organisation	Universitas Sriwijaya, Jl. Inspektur Marzuki RT. 01/09 Lrg. Damai I No. 2236 Pakjo, Jln. Raya Palembang - Prabumulih Km. 32 Indralaya, OI, Sumatera Selatan, Palembang, 30138, Indonesia	**Hosting company**	unsri.ac.id
Top Level Domain	Indonesia (.ac.id)	**DNS Security Extensions**	*unknown*
Hosting country	ID		

Hosting History

Netblock owner	IP address	OS	Web server	Last seen Refresh
Universitas Sriwijaya University / Direct Member IDNIC Jl. Raya Palembang - Prabumulih Km. 32 Indralaya, Ogan Ilir Sumatera Selatan 30662, Indonesia	103.241.4.11	Linux	nginx	6-Mar-2018
Universitas Sriwijaya University / Direct Member IDNIC Jl. Raya Palembang - Prabumulih Km. 32 Indralaya, Ogan Ilir Sumatera Selatan 30662, Indonesia	103.241.4.11	Linux	nginx/1.1.19	24-Apr-2016
Universitas Sriwijaya University / Direct Member IDNIC Jl. Raya Palembang - Prabumulih Km. 32 Indralaya, Ogan Ilir Sumatera Selatan 30662, Indonesia	103.241.4.11	Linux	Apache	3-Mar-2016
PT Telkom Indonesias customer.	222.124.194.11	Linux	Apache	2-Nov-2013
PT Telkom Indonesias customer.	222.124.194.11	Linux	Apache/2.2.22 Ubuntu	25-Nov-2012
PT Telkom Indonesias customer.	222.124.194.11	Linux	Apache	6-Sep-2012
PT Telkom Indonesias customer.	222.124.194.11	Linux	Apache/2.2.3 CentOS	6-Aug-2012
PT Telkom Indonesias customer.	222.124.194.11	Linux	unknown	1-Mar-2011
PT Telkom Indonesias customer.	222.124.194.11	Linux	Apache/2.2.3 CentOS	26-Feb-2011
PT Telkom Indonesias customer.	222.124.194.11	Linux	Apache/2.2.8 Fedora	23-Mar-2009

Mengetahui informasi dari server unsri.ac.id yang digunakan, mengetahui Risk rating (resiko keamanan website) unsri dimana warna hijau artinya hole rendah untuk dapat diserang, mengetahui Operating System (OS) yang digunakan dan masih banyak lagi fitur menarik yang ada didalamnya.

d. Reserve Domain

Reverse IP Domain Check

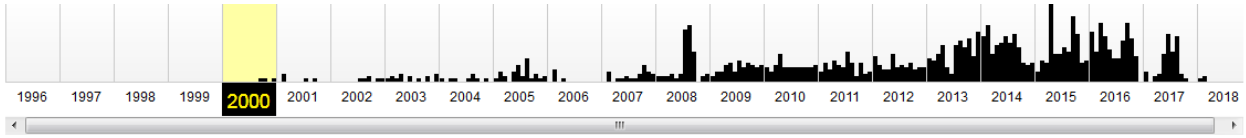
Remote Address unsri.ac.id Check

Found **22** domains hosted on the same web server as unsri.ac.id (103.241.4.11).

103.241.4.11
bse-diknas.unsri.ac.id
kemahasiswaan.unsri.ac.id
lemlit.unsri.ac.id
mkk.unsri.ac.id
pustaka.unsri.ac.id
www.baliteks.unsri.ac.id
www.kemahasiswaan.unsri.ac.id
www.nhk.or.jp
www.pdu.fk.unsri.ac.id
www.unsri.ac.id
archery.unsri.ac.id
digilib.unsri.ac.id
lecturer.unsri.ac.id
mipa.unsri.ac.id
pdu.fk.unsri.ac.id
unsri.ac.id
www.digilib.unsri.ac.id
www.lemlit.unsri.ac.id
www.pdg.fk.unsri.ac.id
www.sipil.ft.unsri.ac.id
yadiutama.unsri.ac.id

Dari hasil reverse IP ke domain, di dapat bahwa domain unsri.ac.id bukan lah satu satunya domain yang hosting di satu web server tersebut, melainkan ada 22 domain, tindakan seperti ini sangatlah bahaya apalagi bila layanan website kita mempunyai informasi penting, karena penyerang bisa saja masuk kedalam sistem dari website lain yang mempunyai bug atau celah.

e. Web Archive



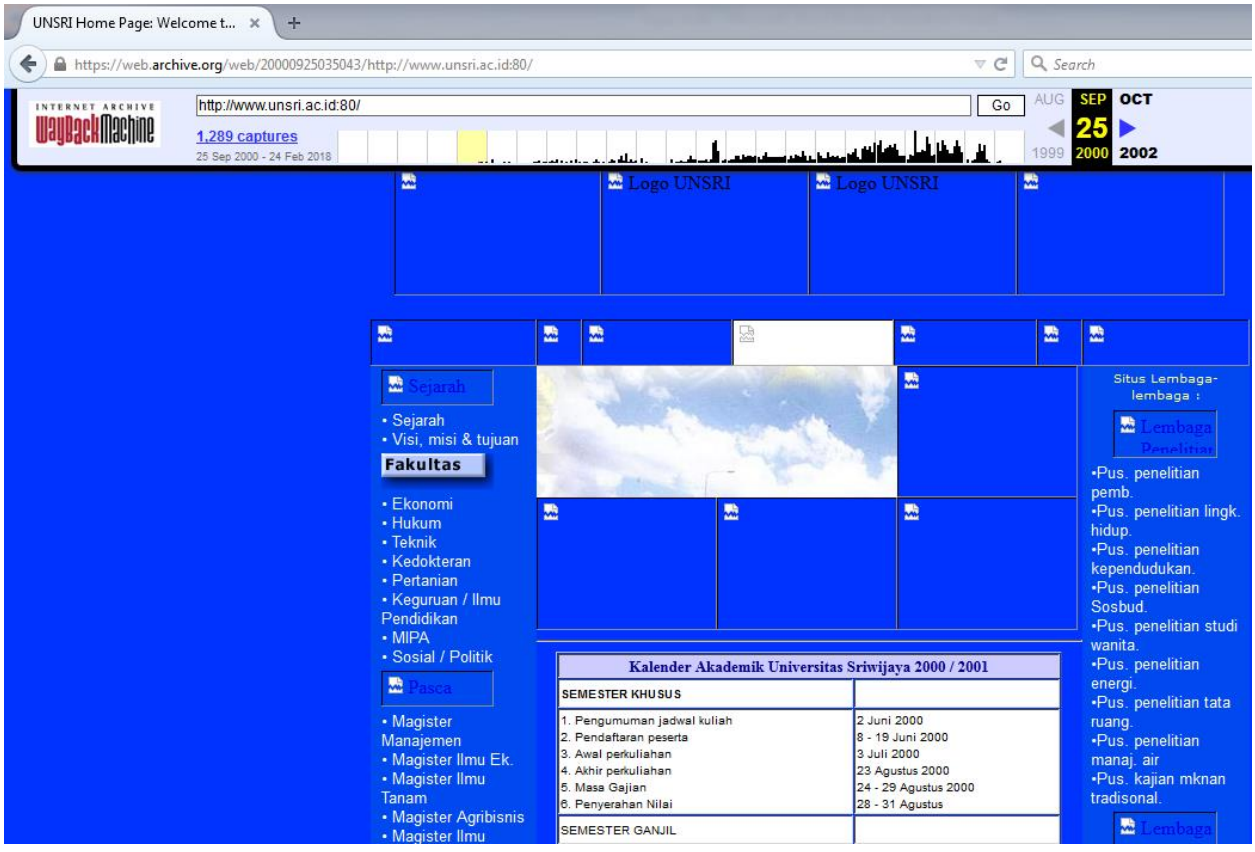
Wed, 25 Oct 2000 05:38:35 GMT (why: alexa_2000, alexacrawls)

SEP						
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCT						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOV						
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

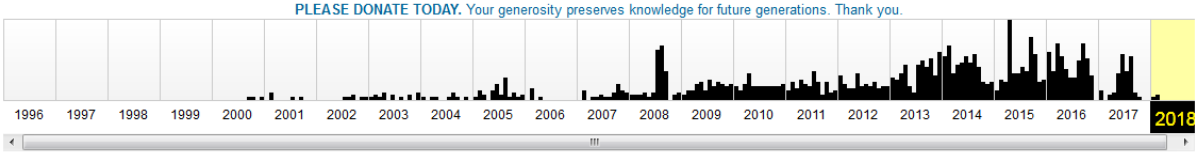
DEC						
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

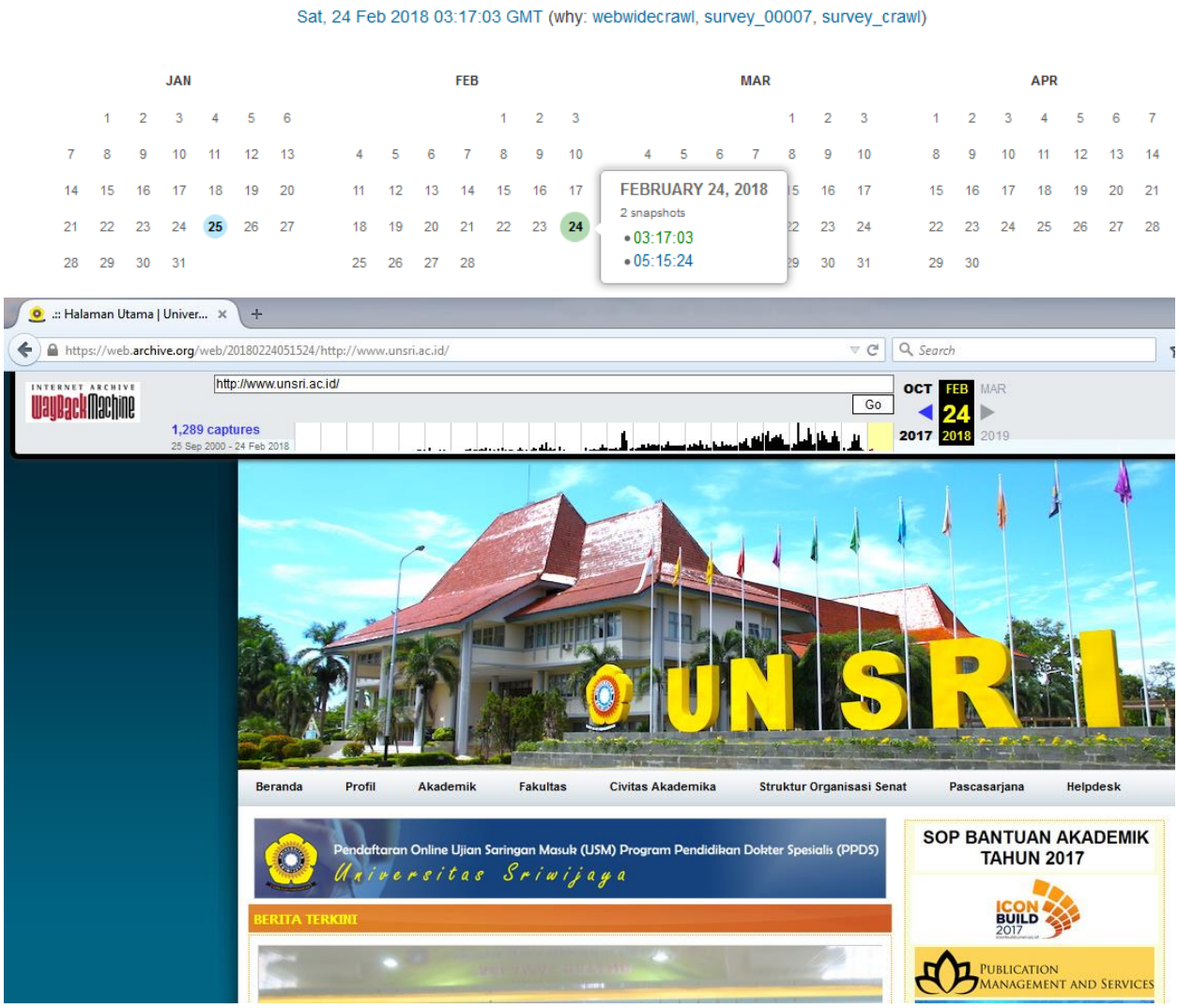


Saved **1,289 times** between September 25, 2000 and February 24, 2018.

Summary of unsri.ac.id · Site Map of unsri.ac.id

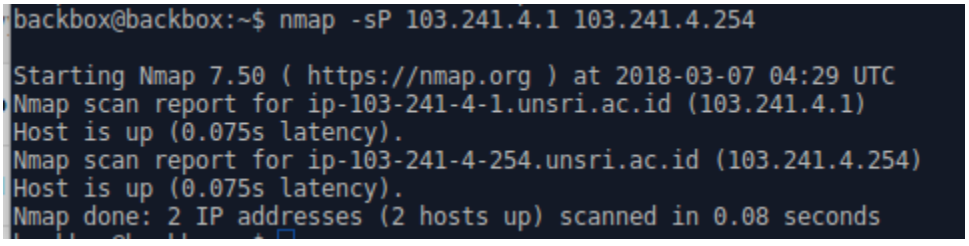
PLEASE DONATE TODAY. Your generosity preserves knowledge for future generations. Thank you.





Dari informasi yang di dapat dari archive.org, website unsri pertama kali online pada 25 september tahun 2000, webtool archive.org banyak menyimpan perubahan pada website http://unsri.ac.id yang mana informasi di sana bisa di manfaatka penyerang apabila ada data penting di website unsri.ac.id, meskipun sudah di hapus dari server unsri.ac.id.

2. Scanning Network
   a. Scanning Network

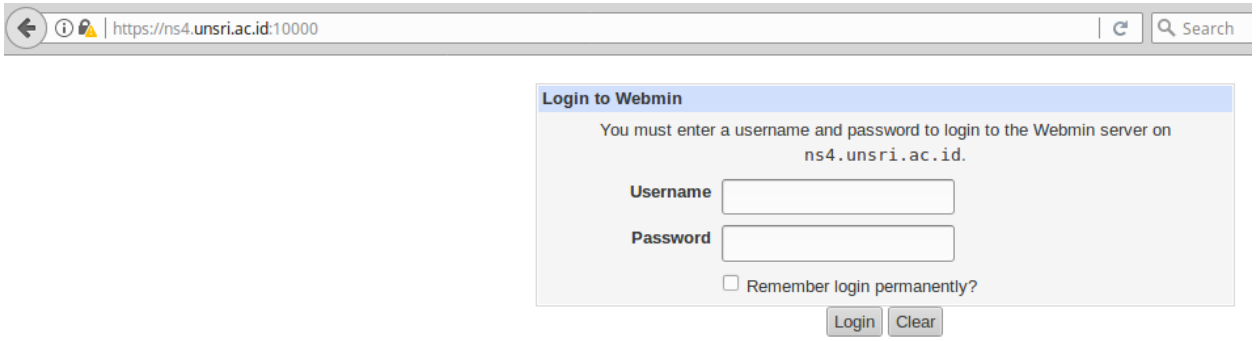


Range ip yang dilihat 103.241.4.1 103.241.4.254, dimana seharusnya informasi semua range ip tertampil, saat asisten praktikum mengajarkan, namun pada pc yang saya coba tidak tampil, bisa saja karena connection yang kurang. Sehingga hanya 2 range ip yang tertampil.

b. Memeriksa service yang berjalan pada port

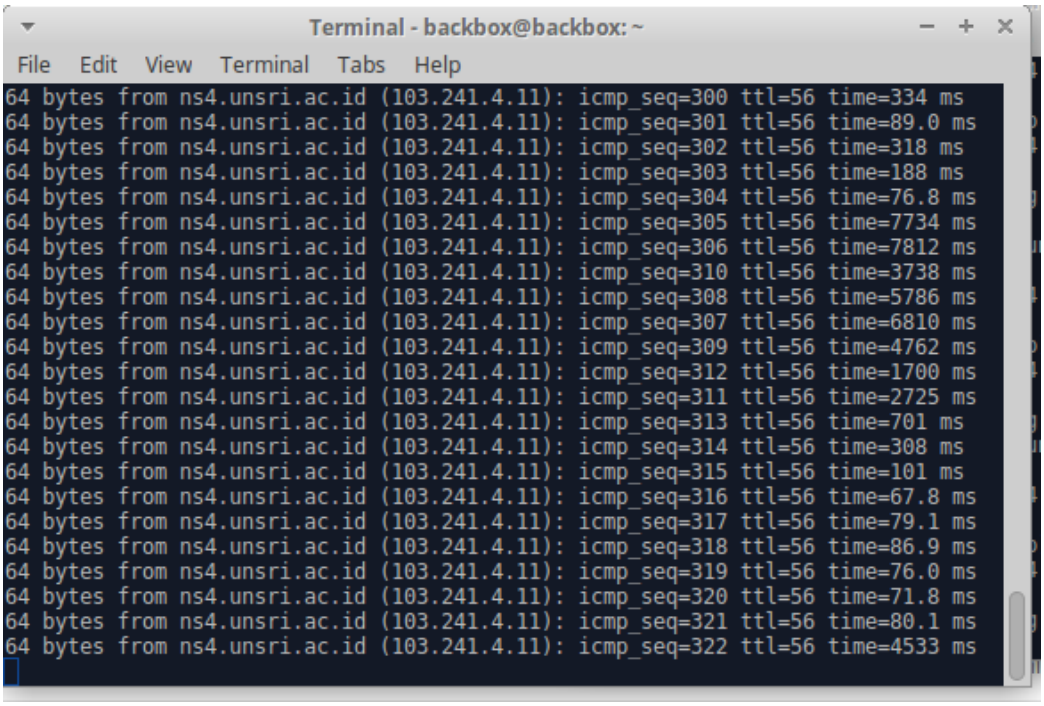
```
backbox@backbox:~$ nmap -sV 103.241.4.11

Starting Nmap 7.50 ( https://nmap.org ) at 2018-03-07 04:30 UTC
Nmap scan report for ns4.unsri.ac.id (103.241.4.11)
Host is up (0.088s latency).
Not shown: 992 closed ports
PORT      STATE    SERVICE  VERSION
21/tcp    open     ftp      vsftpd 2.0.8 or later
22/tcp    filtered ssh
53/tcp    filtered domain
80/tcp    open     http     nginx
111/tcp   open     rpcbind?
443/tcp   open     ssl/http nginx
8000/tcp  open     http     Apache httpd
10000/tcp open     http     MiniServ 1.860 (Webmin httpd)

Service detection performed. Please report any incorrect results at https://nmap
.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 63.71 seconds
backbox@backbox:~$
```

Dari perintah diatas kita bisa mengetahui port terdapat informasi port, status, bahkan versi.



Saat mencoba salah satu port yang terbuka adalah port 10000 seperti tampilan diatas

```
backbox@backbox:~$ nc unsri.ac.id 21
220 Sriwijaya University
```



c. Mengidentifikasi sistem operasi mesin (OS)

```
backbox@backbox:~$ sudo nmap -O 103.241.4.11

Starting Nmap 7.50 ( https://nmap.org ) at 2018-03-07 04:57 UTC
Nmap scan report for ns4.unsri.ac.id (103.241.4.11)
Host is up (0.38s latency).
Not shown: 992 closed ports
PORT      STATE    SERVICE
21/tcp    open     ftp
22/tcp    filtered ssh
53/tcp    filtered domain
80/tcp    open     http
111/tcp   open     rpcbind
443/tcp   open     https
8000/tcp  open     http-alt
10000/tcp open     snet-sensor-mgmt
Device type: general purpose|firewall
Running (JUST GUESSING): Linux 3.X|2.6.X|4.X (93%), WatchGuard Fireware 11.X (88
%)
OS CPE: cpe:/o:linux:linux_kernel:3.8 cpe:/o:watchguard:fireware:11.8 cpe:/o:lin
ux:linux_kernel:2.6 cpe:/o:linux:linux_kernel:4
Aggressive OS guesses: Linux 3.8 (93%), Linux 3.2 - 3.8 (89%), WatchGuard Firewa
re 11.8 (88%), Linux 3.0 (88%), Linux 3.0 - 3.2 (88%), Linux 2.6.32 - 2.6.39 (87
%), Linux 3.5 (87%), Linux 3.1 - 3.2 (86%), Linux 2.6.32 (85%), Linux 2.6.32 or
3.10 (85%)
No exact OS matches for host (test conditions non-ideal).
Network Distance: 18 hops

OS detection performed. Please report any incorrect results at https://nmap.org/
submit/ .
Nmap done: 1 IP address (1 host up) scanned in 81.33 seconds
backbox@backbox:~$
```

Dari data diatas, prediksi terhadap sistem operasi yang digunakan dimana ia memprediksi 93% menggunkanan Linux versi 3.8. sehingga kita perlu mencari CVE nya untuk mengetahui lebih detail.

3. Common Vulnerabilities and Exposures

Linux 3.8

https://cve.mitre.org/cgi-bin/cvekey.cgi?keyword=Linux+3.8

Search Results

There are **9** CVE entries that match your search.

Name	Description
CVE-2013-2548	The crypto_report_one function in crypto/crypto_user.c in the report API in the crypto user configuration API in the Linux kernel through 3.8.2 uses an incorrect length value during a copy operation, which allows local users to obtain sensitive information from kernel memory by leveraging the CAP_NET_ADMIN capability.
CVE-2013-2547	The crypto_report_one function in crypto/crypto_user.c in the report API in the crypto user configuration API in the Linux kernel through 3.8.2 does not initialize certain structure members, which allows local users to obtain sensitive information from kernel heap memory by leveraging the CAP_NET_ADMIN capability.
CVE-2013-2546	The report API in the crypto user configuration API in the Linux kernel through 3.8.2 uses an incorrect C library function for copying strings, which allows local users to obtain sensitive information from kernel stack memory by leveraging the CAP_NET_ADMIN capability.
CVE-2013-1763	Array index error in the __sock_diag_rcv_msg function in net/core/sock_diag.c in the Linux kernel before 3.7.10 allows local users to gain privileges via a large family value in a Netlink message.
CVE-2013-0343	The ipv6_create_tempaddr function in net/ipv6/addrconf.c in the Linux kernel through 3.8 does not properly handle problems with the generation of IPv6 temporary addresses, which allows remote attackers to cause a denial of service (excessive retries and address-generation outage), and consequently obtain sensitive information, via ICMPv6 Router Advertisement (RA) messages.
CVE-2013-0290	The __skb_recv_datagram function in net/core/datagram.c in the Linux kernel before 3.8 does not properly handle the MSG_PEEK flag with zero-length data, which allows local users to cause a denial of service (infinite loop and system hang) via a crafted application.
CVE-2013-0231	The pciback_enable_msi function in the PCI backend driver (drivers/xen/pciback/conf_space_capability_msi.c) in Xen for the Linux kernel 2.6.18 and 3.8 allows guest OS users with PCI device access to cause a denial of service via a large number of kernel log messages. NOTE: some of these details are obtained from third party information.
CVE-2012-4542	block/scsi_ioctl.c in the Linux kernel through 3.8 does not properly consider the SCSI device class during authorization of SCSI commands, which allows local users to bypass intended access restrictions via an SG_IO ioctl call that leverages overlapping opcodes.
CVE-2005-4351	The securelevels implementation in FreeBSD 7.0 and earlier, OpenBSD up to 3.8, DragonFly up to 1.2, and Linux up to 2.6.15 allows root users to bypass immutable settings for files by mounting another filesystem that masks the immutable files while the system is running.

https://www.cvedetails.com/version/142711/Linux-Linux-Kernel-3.8.0.html

Linux » Linux Kernel » 3.8.0 : Vulnerability Statistics

Vulnerabilities (231) Related Metasploit Modules (Cpe Name:*cpe:/o:linux:linux_kernel:3.8.0*)

Vulnerability Feeds & Widgets

Vulnerability Trends Over Time

Year	# of Vulnerabilities	DoS	Code Execution	Overflow	Memory Corruption	Sql Injection	XSS	Directory Traversal	Http Response Splitting	Bypass something	Gain Information	Gain Privileges	CSRF	File Inclusion	# of exploits
2013	89	52	3	24	9					8	18	14			3
2014	83	51	2	10	6					8	21	14			8
2015	10	5		1	1					2	1	2			
2016	24	17		10	6					1		12			
2017	20	9	1	3						1	3	3			
2018	5	4		1	1										
Total	231	138	6	49	23					20	43	45			11
% Of All		59.7	2.6	21.2	10.0	0.0	0.0	0.0	0.0	8.7	18.6	19.5	0.0	0.0	

Memungkinkan pengguna lokal mendapatkan informasi sensitif dari memori kernel dengan memanfaatkan kemampuan CAP_NET_ADMIN.

Web yang digunakan “unsri.ac.id”

IP yang digunakan 103.241.4.11

celah: Low