



Network Design & Management (IT 3010)
3rd Year, 1st Semester

Assignment

Apache Web Server/DNS Zones

Submitted to
Sri Lanka Institute of Information Technology

IT19013374

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In partial fulfillment of the requirements for the
Bachelor of Science Special Honors Degree in Information Technology

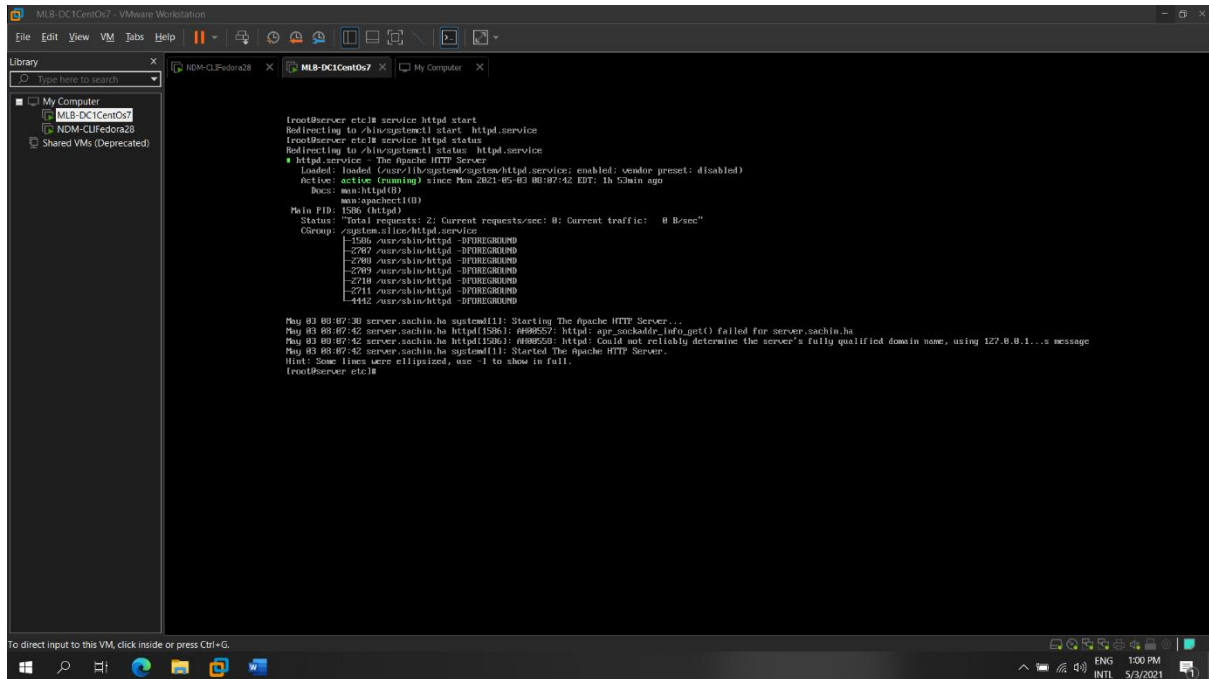
2021.05.03

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1).Create the necessary zone files and files

1.DNS named status

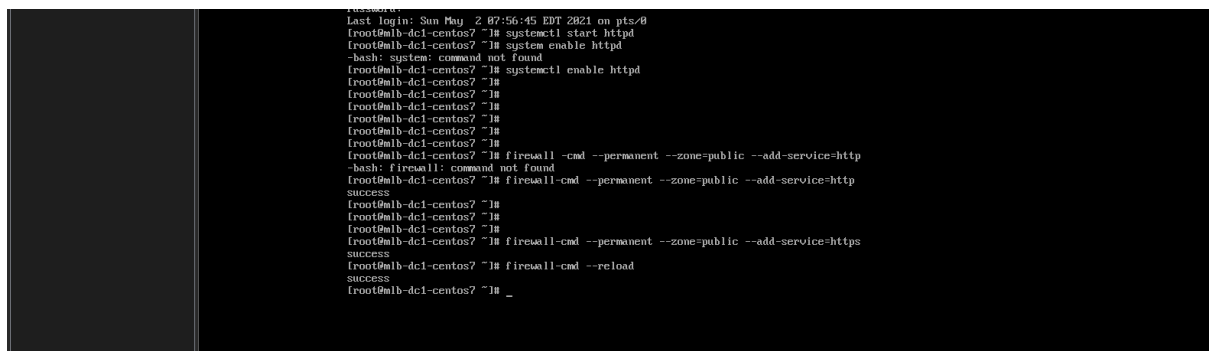


```
root@server etc# service httpd start
Redirecting to /bin/systemctl start httpd.service
root@server etc# service httpd status
Redirecting to /bin/systemctl status httpd.service
* httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2021-05-03 08:07:42 EDT; 1h 53min ago
     Docs: man:htpasswd(8)
           man:apachectl(8)
   Main PID: 1596 (httpd)
   Status: "Total requests: 2; Current requests/sec: 0; Current traffic: 0 B/sec"
   Group: /system.slice/httpd.service
   CGroup: /system.slice/httpd.service
           └─1596 /usr/sbin/httpd -DFOREGROUND
           └─2707 /usr/sbin/httpd -DFOREGROUND
           └─2708 /usr/sbin/httpd -DFOREGROUND
           └─2709 /usr/sbin/httpd -DFOREGROUND
           └─2710 /usr/sbin/httpd -DFOREGROUND
           └─2711 /usr/sbin/httpd -DFOREGROUND
           └─2712 /usr/sbin/httpd -DFOREGROUND

May 03 08:07:30 server.sachin.ha systemd[1]: Starting The Apache HTTP Server...
May 03 08:07:42 server.sachin.ha httpd[1596]: #000000: httpd: apr_sockaddr_info_get() failed for server.sachin.ha
May 03 08:07:42 server.sachin.ha httpd[1596]: #000000: httpd: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1...s message
May 03 08:07:42 server.sachin.ha systemd[1]: Started The Apache HTTP Server.
Hint: Some lines were ellipsized, use -l to show in full.
root@server etc#
```

Figure 1-apache server start and status

2.Set up firewall



```
root@server etc#
Last login: Sun May 2 07:56:45 EDT 2021 on pts/0
root@mlb-dc1-centos? ~# systemctl start httpd
root@mlb-dc1-centos? ~# systemctl enable httpd
-bash: systemctl: command not found
root@mlb-dc1-centos? ~# systemctl enable httpd
-bash: systemctl: command not found
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~# firewall-cmd --permanent --zone=public --add-service=http
-bash: firewall: command not found
root@mlb-dc1-centos? ~# firewall-cmd --permanent --zone=public --add-service=http
success
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~#
root@mlb-dc1-centos? ~# firewall-cmd --permanent --zone=public --add-service=https
success
root@mlb-dc1-centos? ~# firewall-cmd --reload
success
root@mlb-dc1-centos? ~# _
```

Figure 2-set up firewall rules

3.Create Zone files in named.conf

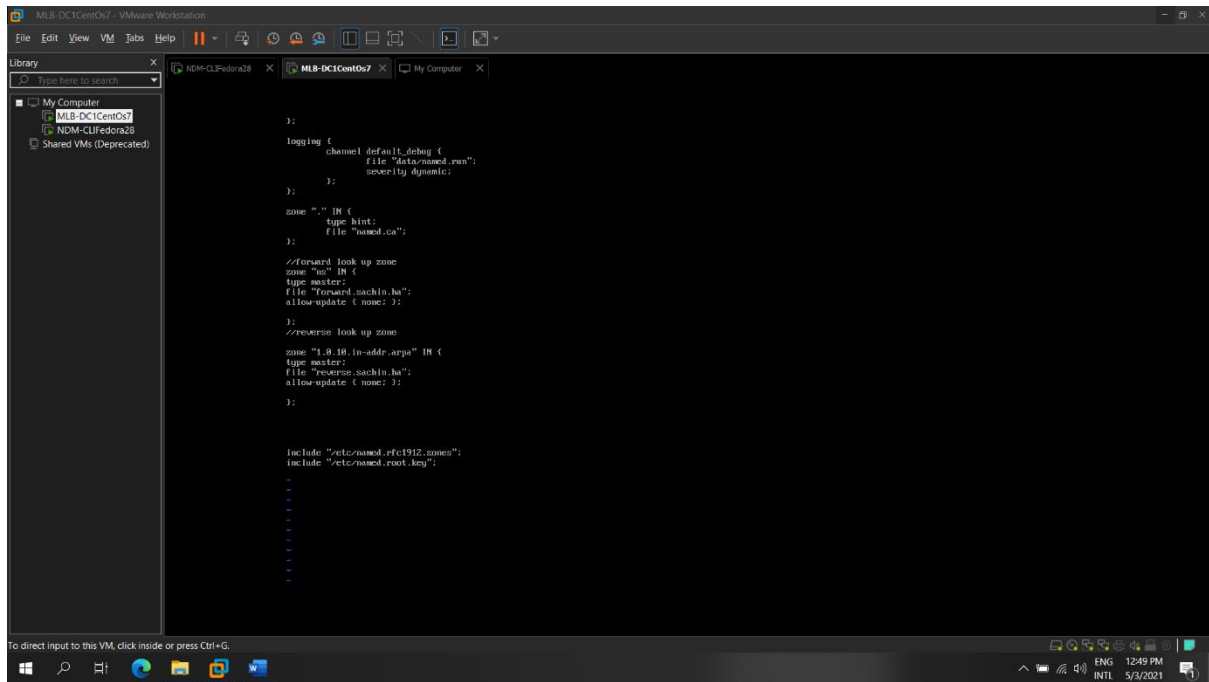


Figure 3-create zone files

4.Create forward zone(forward.sachin.ha)

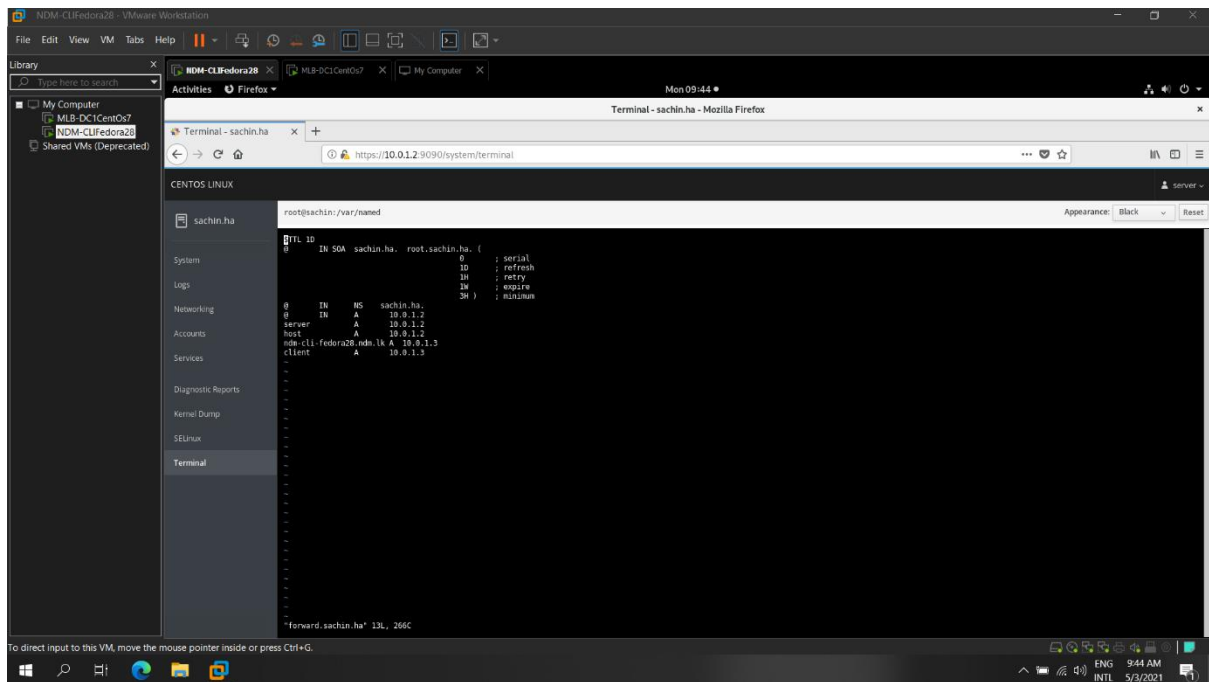


Figure 4-create forward zone

5. Create reverse zone(reverse.sachin.ha)

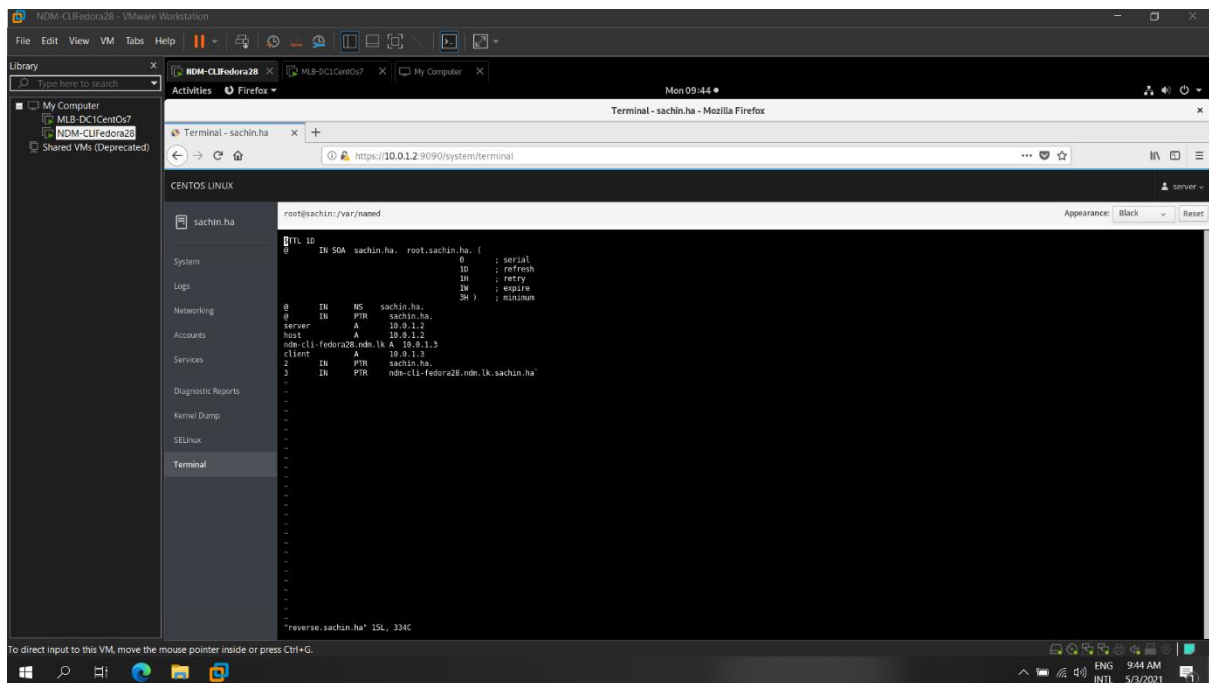


Figure 5-create rever zone

The image shows a screenshot of the Oracle VM VirtualBox application. The top menu bar includes File, Edit, View, VM, Tabs, and Help. Below the menu is a toolbar with various icons for VM management. The main window is titled 'NDM-CLIFedora28' and shows a terminal window. The terminal window has a title bar 'Terminal - sachin.ha - Mozilla Firefox' and a URL bar showing 'https://10.0.1.2:9090/system/terminal'. The terminal content shows the output of the 'named-checkconf' command, which successfully loads the configuration for the 'sachin.ha' zone. The sidebar on the left shows the VM settings for 'NDM-CLIFedora28', including System, Logs, Networking, Accounts, Services, Diagnostic Reports, Kernel Dump, SELinux, and Terminal. The bottom status bar shows the system clock as 9:47 AM on 5/3/2021.

[illegible]

8. Configure fedora with server ip for DNS (Vi /etc/resolv.conf)

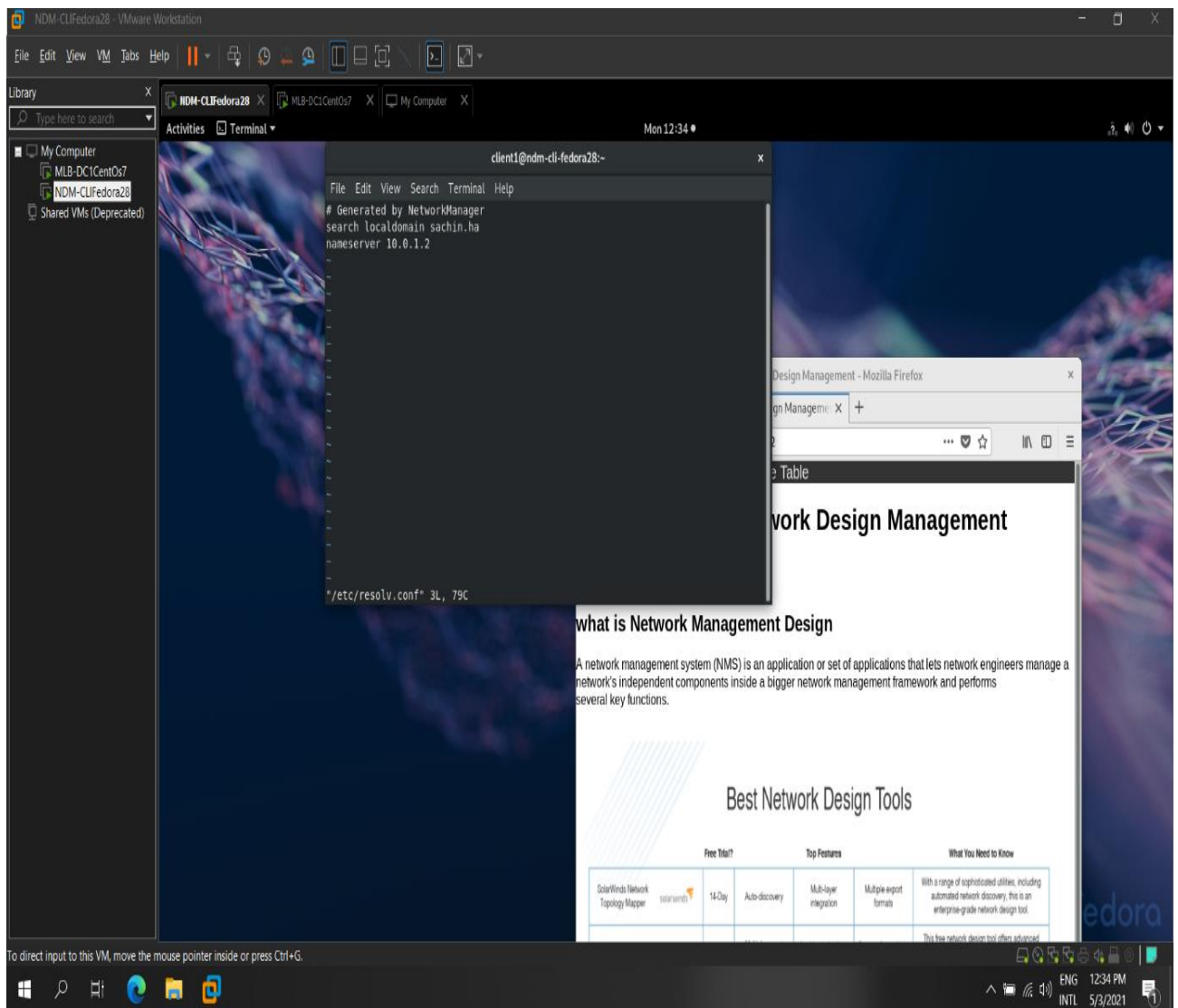
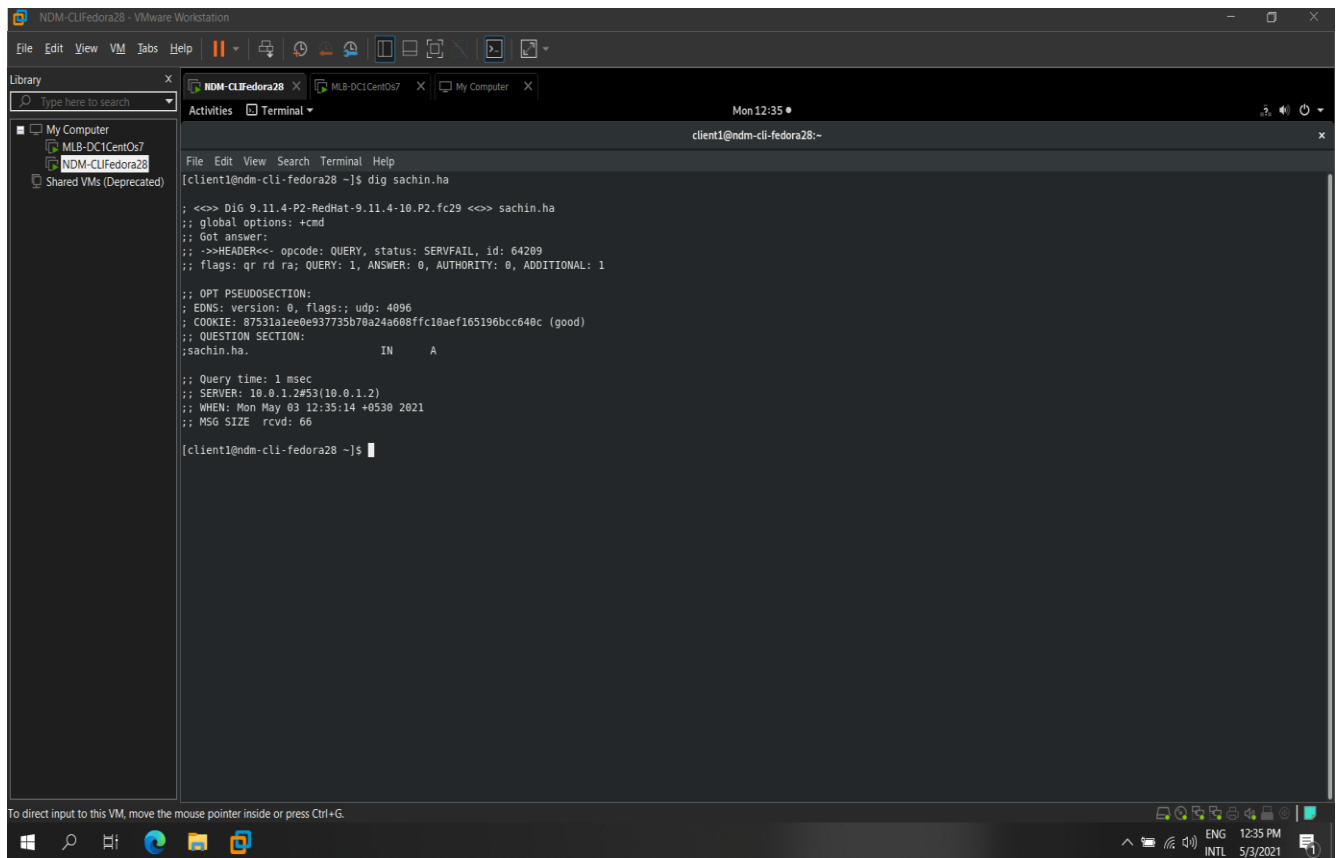


Figure 8-configure fedora with servers ip

9.DNS server make within my name



```
NDM-CLIFedora28 - VMware Workstation
File Edit View VM Tabs Help
Library
Type here to search
My Computer
  MLB-DC1CentOs7
  NDM-CLIFedora28
  Shared VMs (Deprecated)
Activities Terminal
Mon 12:35
client1@ndm-cli-fedora28:~
File Edit View Search Terminal Help
[client1@ndm-cli-fedora28 ~]$ dig sachin.ha
; <<> Dig 9.11.4-P2-RedHat-9.11.4-10.P2.fc29 <<> sachin.ha
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: SERVFAIL, id: 64209
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1


;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: udp: 4096
; COOKIE: 87531alee0e937735b78a24a608ffc10aef165196bcc640c (good)
;; QUESTION SECTION:
;sachin.ha.                IN      A

;; Query time: 1 msec
;; SERVER: 10.0.1.2#53(10.0.1.2)
;; WHEN: Mon May 03 12:35:14 +0530 2021
;; MSG SIZE rcvd: 66

[client1@ndm-cli-fedora28 ~]$
```

Figure 9-dig command with my name

10. dig command in fedora with my name



```
File Edit View Search Terminal Help
[client1@ndm-cli-fedora28 ~]$ dig sachin.ha
; <<> Dig 9.11.4-P2-RedHat-9.11.4-10.P2.fc29 <<> sachin.ha
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: SERVFAIL, id: 64209
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: udp: 4096
; COOKIE: 87531alee0e937735b78a24a608ffc10aef165196bcc640c (good)
;; QUESTION SECTION:
;sachin.ha.                IN      A

;; Query time: 1 msec
;; SERVER: 10.0.1.2#53(10.0.1.2)
;; WHEN: Mon May 03 12:35:14 +0530 2021
;; MSG SIZE rcvd: 66

[client1@ndm-cli-fedora28 ~]$
```

Figure 10-dig fedora

2).Apache server

1. Secure the apache server with SSL and configure(openSSL)

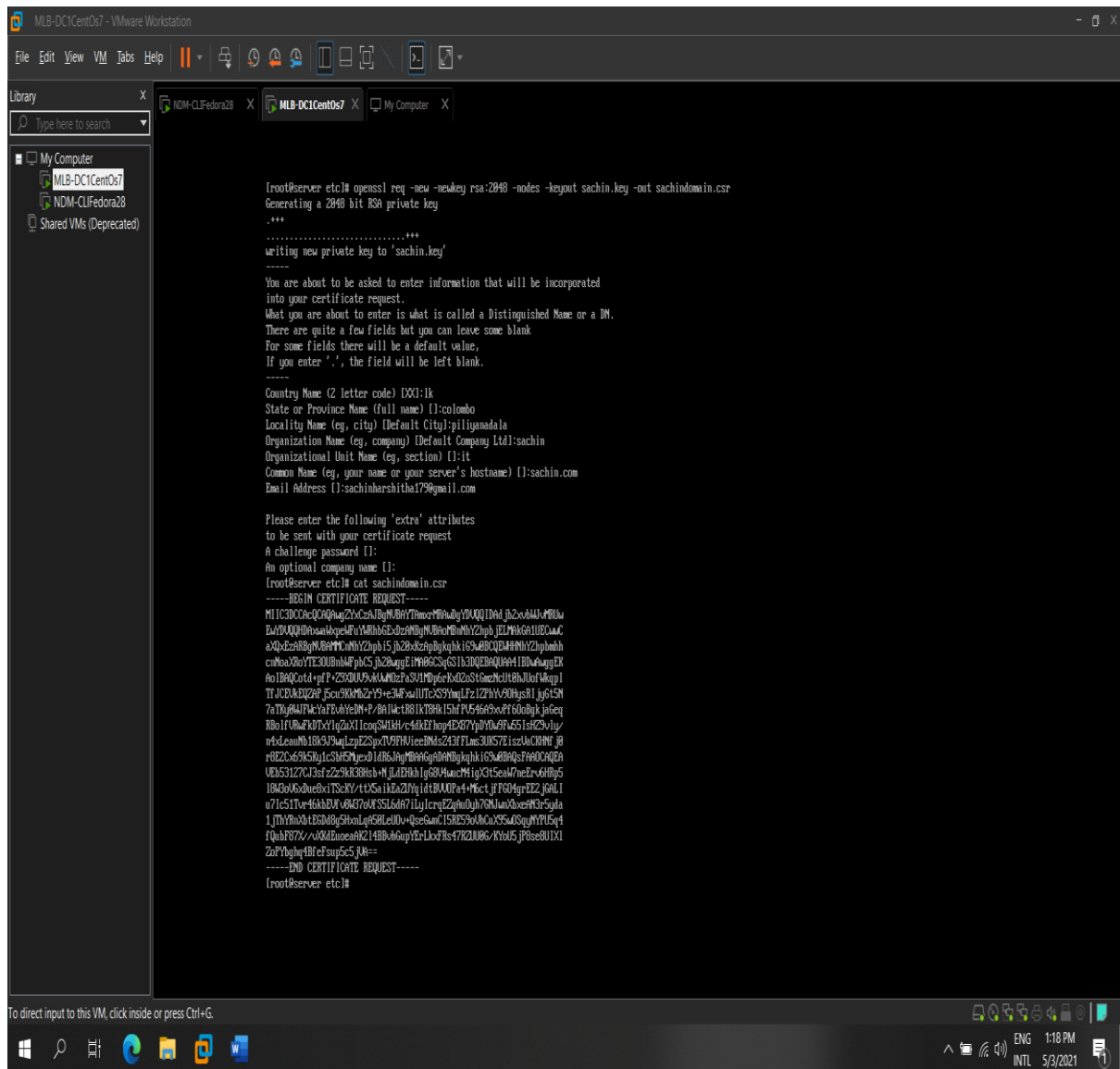


Figure 11-open sll

3)Host page

1.Contains page graphical or picture-based information and module of Network Design

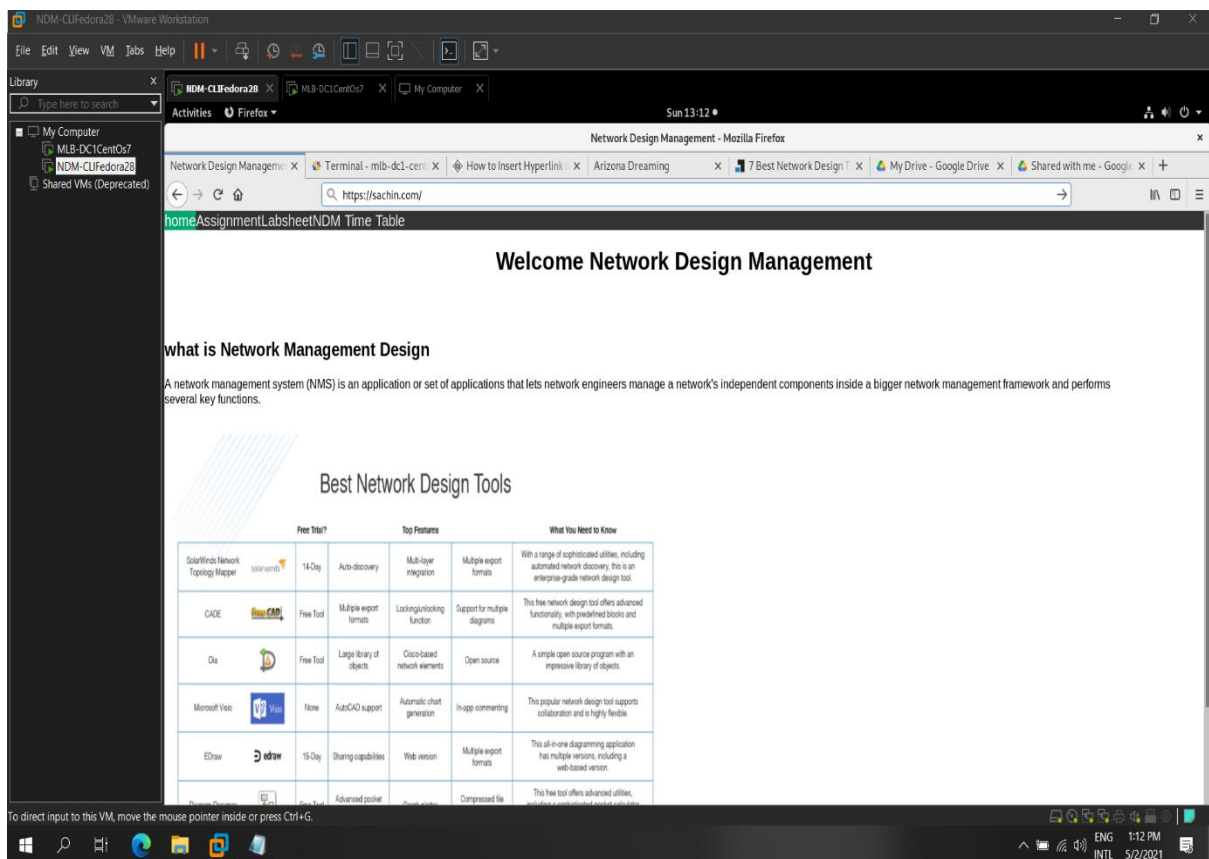


Figure 12-final output

2.Navigate other page(NDM Time Table)

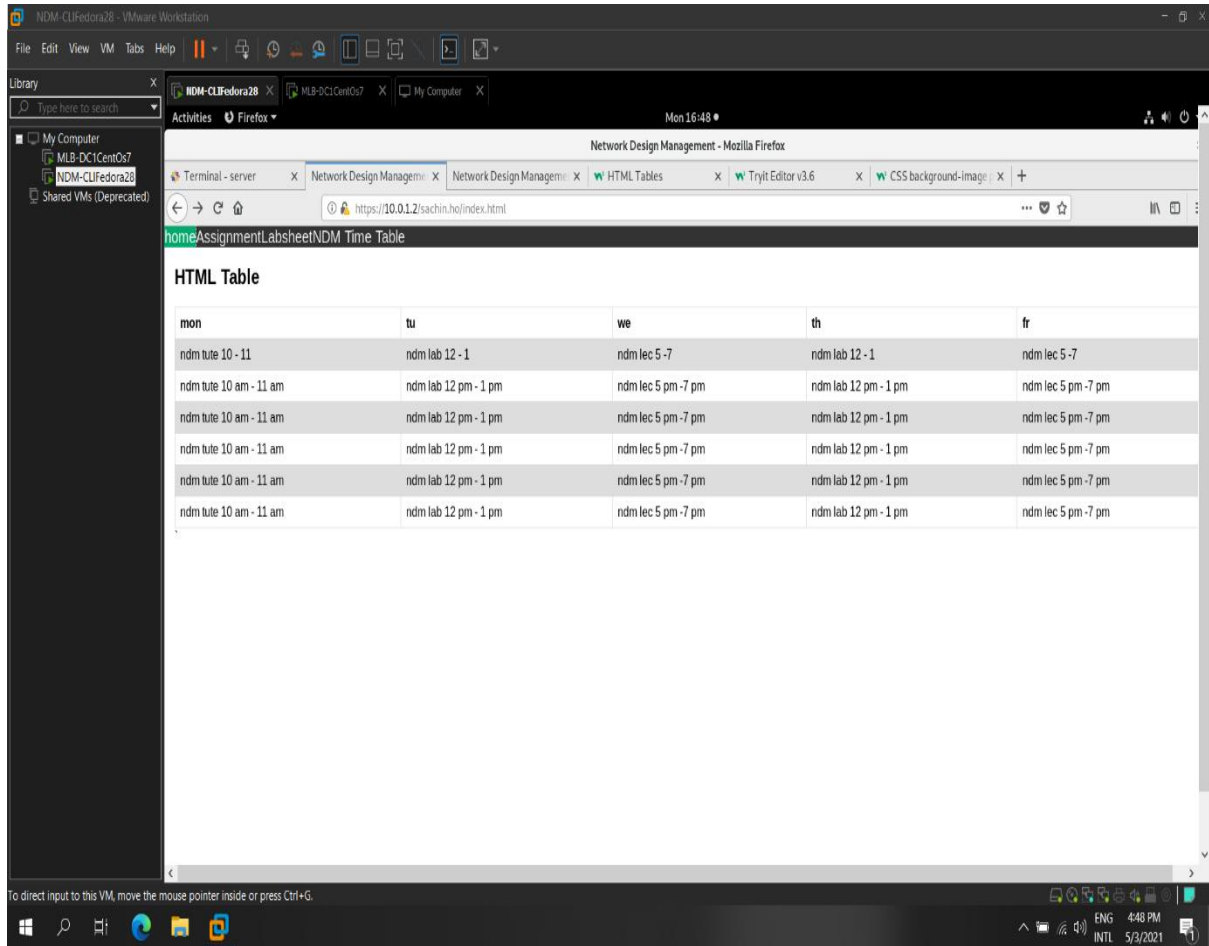


Figure 13-navigate pages