LAPORAN JOB SHET 6

Praktikum Network Security Authentikasi

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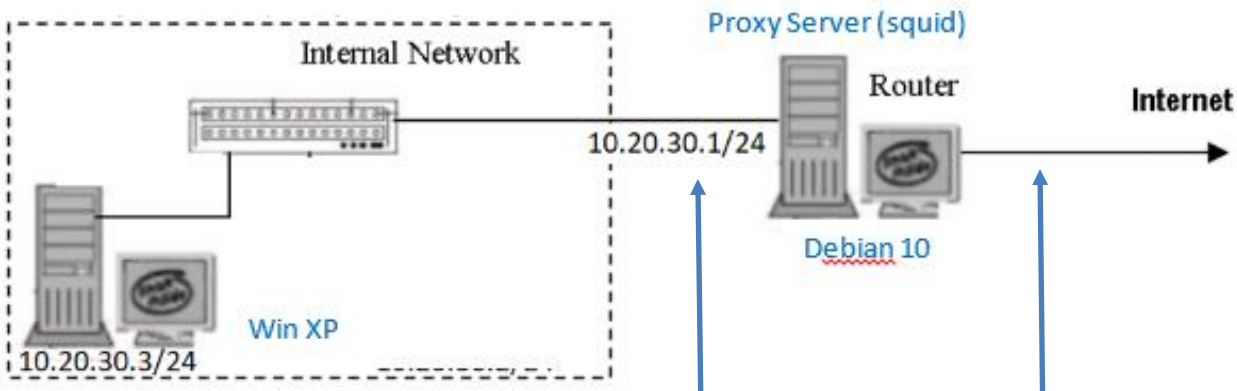
ASAL SEKOLAH : S M K N 1 C I M A H I
K E L A S : X I I S I J A A

Buat Laporan resmi dari seluruh kegiatan percobaan. Lengkapi dengan :

1. Nama dan Asal Sekolah yang Jelas
2. Lakukan percobaan sesuai urutan seperti percobaan diatas. !

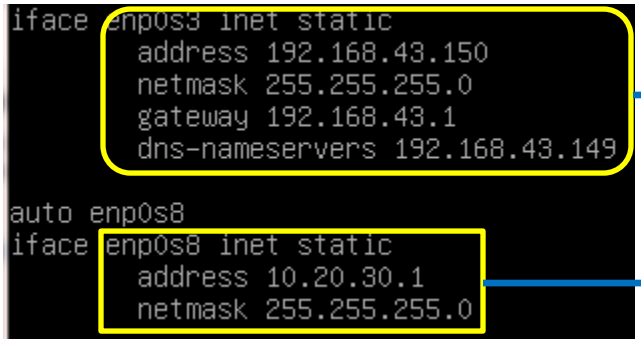
Topologi :

*** Berikut ini topologi yang sudah disesuaikan dengan soal dan praktikum yang dilakukan !

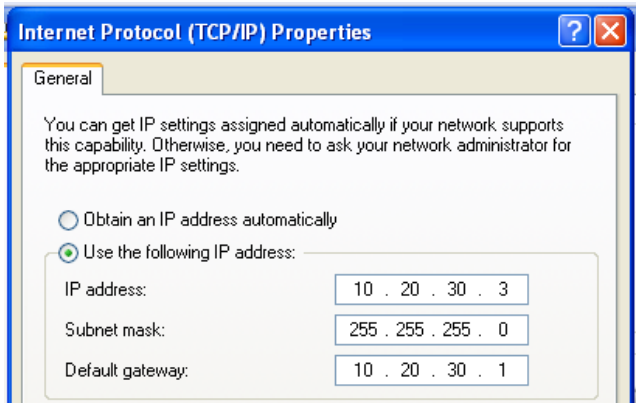


Device :

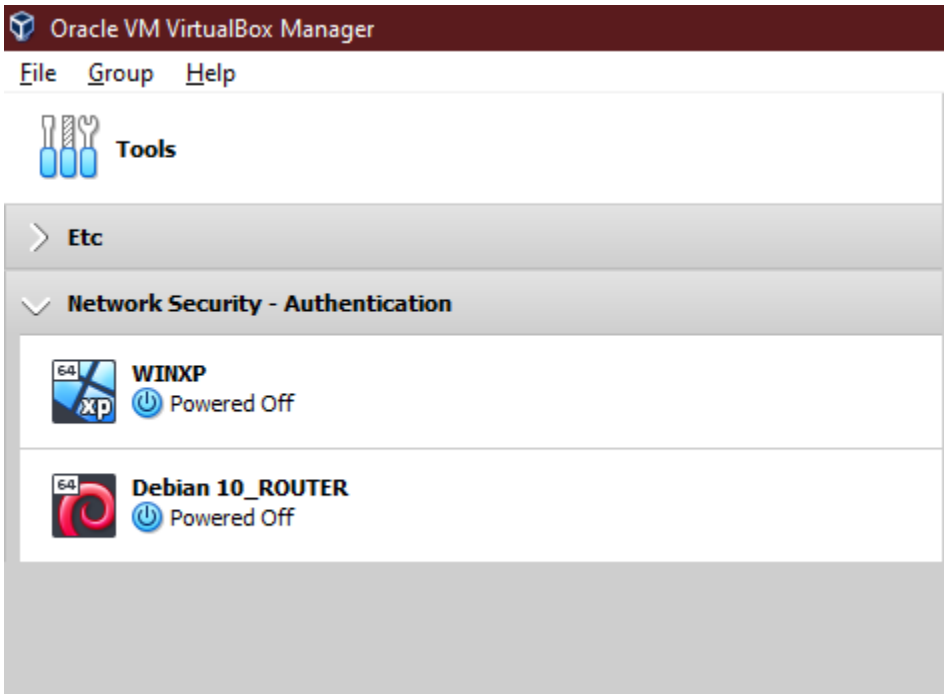
Router & Proxy Server Squid : OS Debian 10



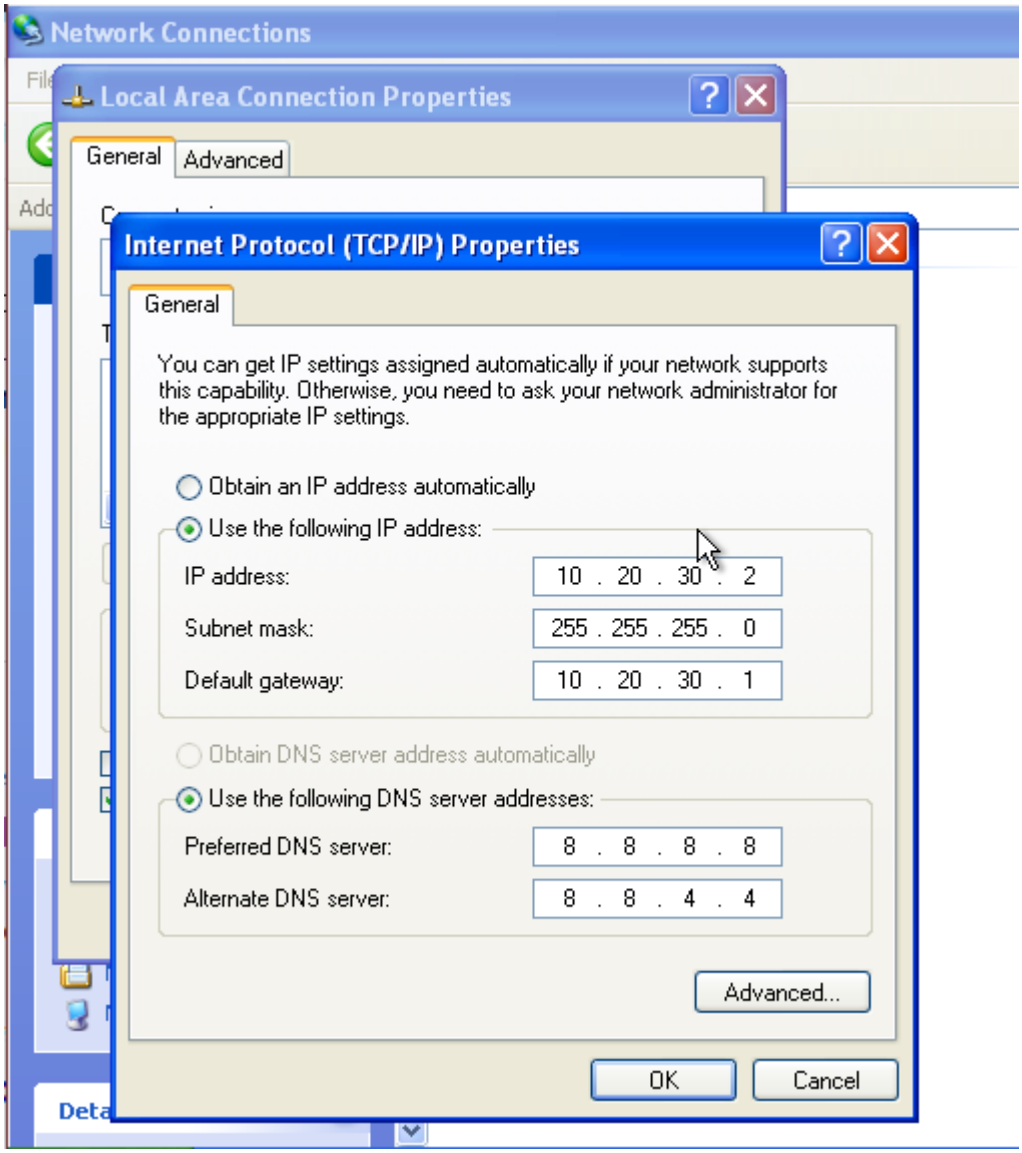
Client : OS Windows XP



Screen capture device yang akan digunakan:



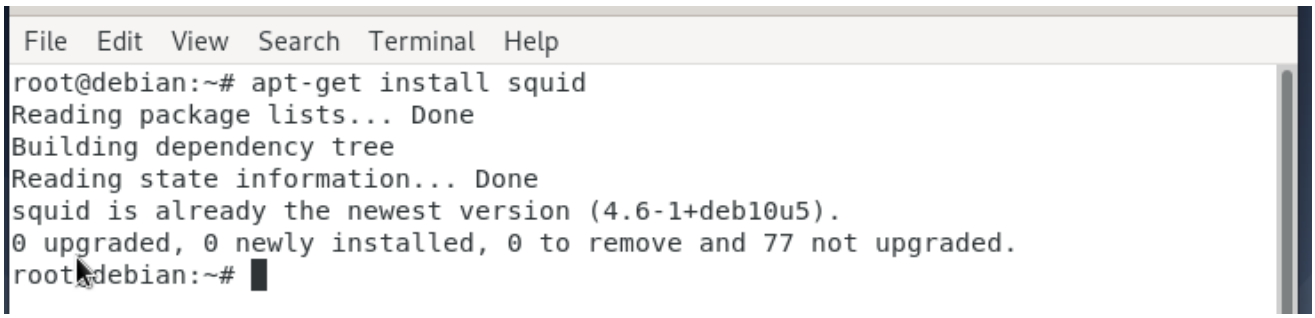
Screen capture hasil konfigurasi IP Win XP:



Instal paket squid Router/Proxy Squid Server

apt-get install squid

CAPTURED :



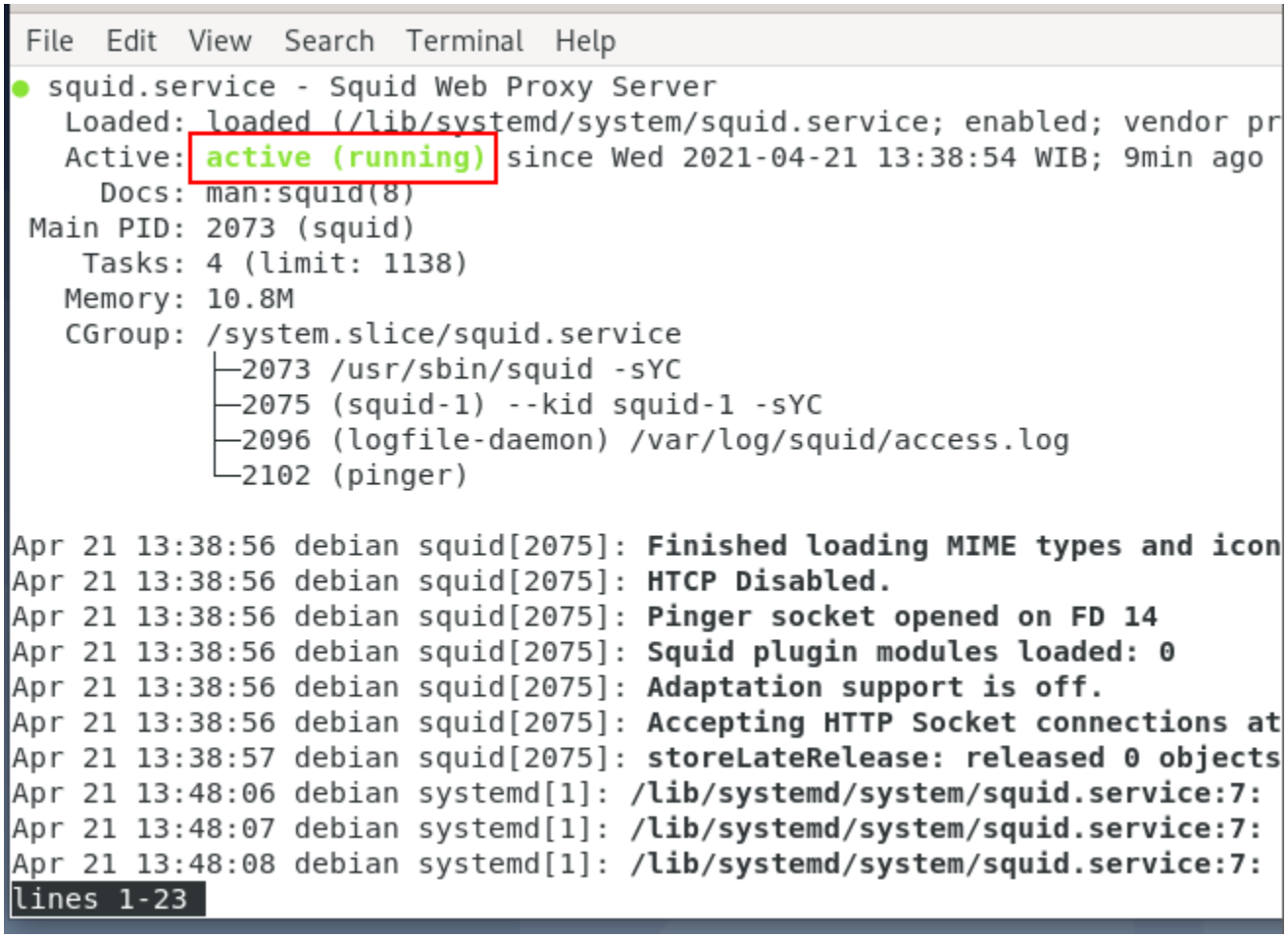
Pastikan tidak ada Erorr, periksa dengan perintah : # squid –z

CAPTURED :

```
root@debian:~# sudo squid -z
2021/04/21 13:49:37| FATAL: Squid is already running: Found fresh instance PID
file (/var/run/squid.pid) with PID 2073
    exception location: Instance.cc(121) ThrowIfAlreadyRunningWith
```

Pastikan Status Squid sudah aktiv (Hijau) dengan perintah :

CAPTURED :



Konfigurasi AUTENTIKASI pada script squid dengan perintah :

nano /etc/squid/squid.conf

CAPTURED :

```
File  Edit  View  Search  Terminal  Help
  GNU nano 3.2                          squid.conf

#        WELCOME TO SQUID 4.6
#        ----------------------------
#
#        This is the documentation for the Squid configuration file.
#        This documentation can also be found online at:
#                http://www.squid-cache.org/Doc/config/
#
#        You may wish to look at the Squid home page and wiki for the
#        FAQ and other documentation:
#                http://www.squid-cache.org/
#                http://wiki.squid-cache.org/SquidFaq
#                http://wiki.squid-cache.org/ConfigExamples
#
#        This documentation shows what the defaults for various directives
#        happen to be.  If you don't need to change the default, you should
#        leave the line out of your squid.conf in most cases.
#
#        In some cases "none" refers to no default setting at all,
#        while in other cases it refers to the value of the option

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```

Lakukan Tuning (penyesuaian) Script pada Squid

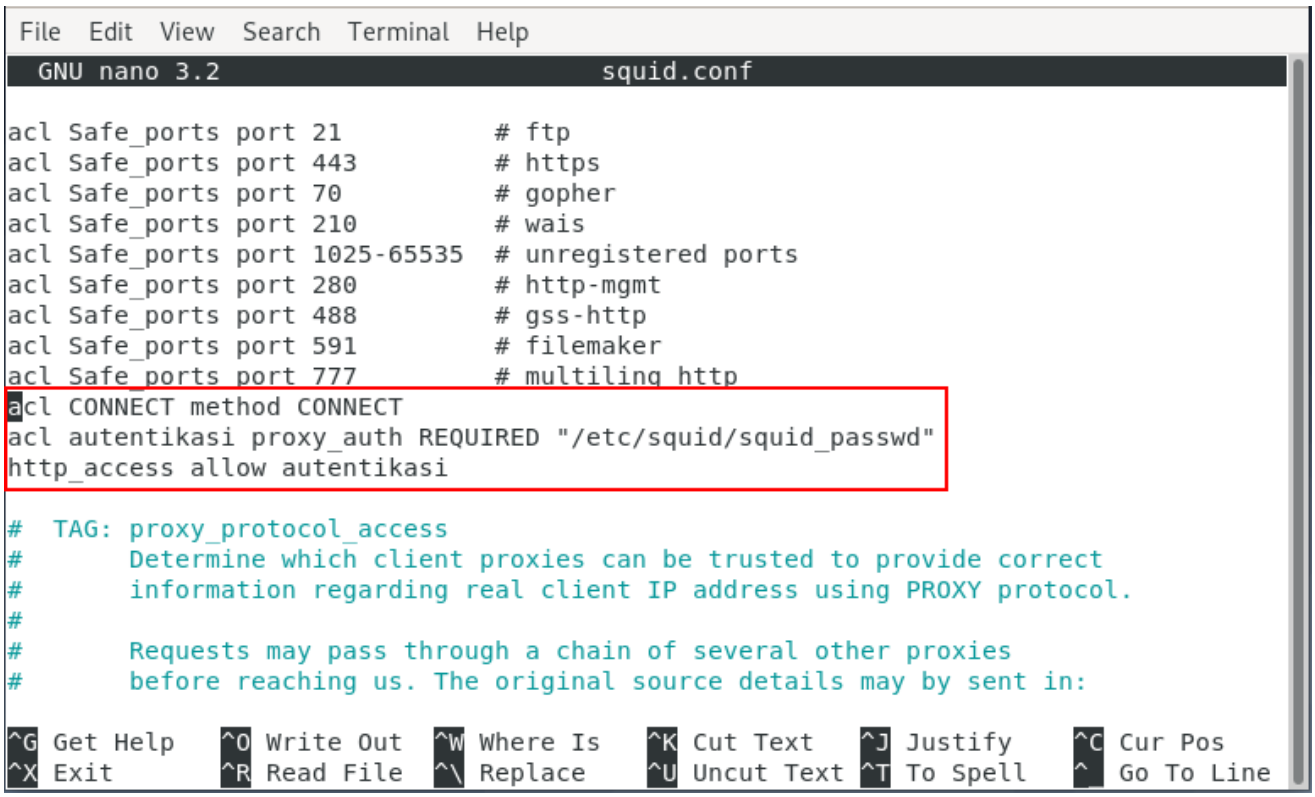
Hilangkan tanda # dan Script menjadi seperti ini :

CAPTURED :

```
File  Edit  View  Search  Terminal  Help
  GNU nano 3.2                          squid.conf

##auth_param digest realm Squid proxy-caching web server
##auth_param digest nonce_garbage_interval 5 minutes
##auth_param digest nonce_max_duration 30 minutes
##auth_param digest nonce_max_count 50
##
##auth_param ntlm program <uncomment and complete this line to activate>
##auth_param ntlm children 20 startup=0 idle=1
##auth_param ntlm keep_alive on
##
auth_param basic program /usr/lib/squid3/ncsa_auth /etc/squid/squid_passwd
auth_param basic children 5 startup=5 idle=1
auth_param basic realm Squid proxy-caching web server
auth_param basic credentialsttl 2 hours
#Default:
# none

#  TAG: authenticate_cache_garbage_interval
#       The time period between garbage collection across the username cache.
#       This is a trade-off between memory utilization (long intervals - say

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```

Tambahkan Script seperti ini :

CAPTURED :



Konfigurasi Script Visible Hostname seperti ini :

CAPTURED :

```
File  Edit  View  Search  Terminal  Help
  GNU nano 3.2                          squid.conf

#       user account for squid with UID/GID matching system policies.
#Default:
# Use system group memberships of the cache_effective_user account

#  TAG: httpd_suppress_version_string   on|off
#       Suppress Squid version string info in HTTP headers and HTML error pages.
#Default:
# httpd_suppress_version_string off

#  TAG: visible_hostname
#       If you want to present a special hostname in error messages, etc,
#       define this.  Otherwise, the return value of gethostname()
#       will be used. If you have multiple caches in a cluster and
#       get errors about IP-forwarding you must set them to have individual
#       names with this setting.
#Default:
# Automatically detect the system host name
visible_hostname localhost
#  TAG: unique_hostname

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```

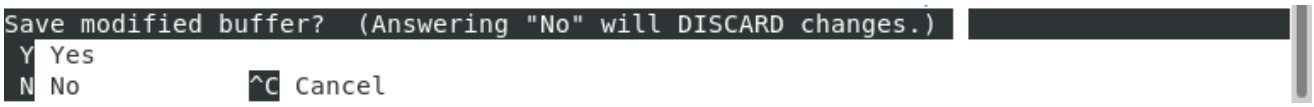
Konfigurasi Script Port tetap 3128 :

CAPTURED :

```
File  Edit  View  Search  Terminal  Help
  GNU nano 3.2                          squid.conf

#                       timeout the time before giving up.
#
#          require-proxy-header
#                       Require PROXY protocol version 1 or 2 connections.
#                       The proxy_protocol_access is required to whitelist
#                       downstream proxies which can be trusted.
#
#       If you run Squid on a dual-homed machine with an internal
#       and an external interface we recommend you to specify the
#       internal address:port in http_port. This way Squid will only be
#       visible on the internal address.
#
#

# Squid normally listens to port 3128
http_port 3128

#  TAG: https_port
#       Usage:  [ip:]port [mode] tls-cert=certificate.pem [options]

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```

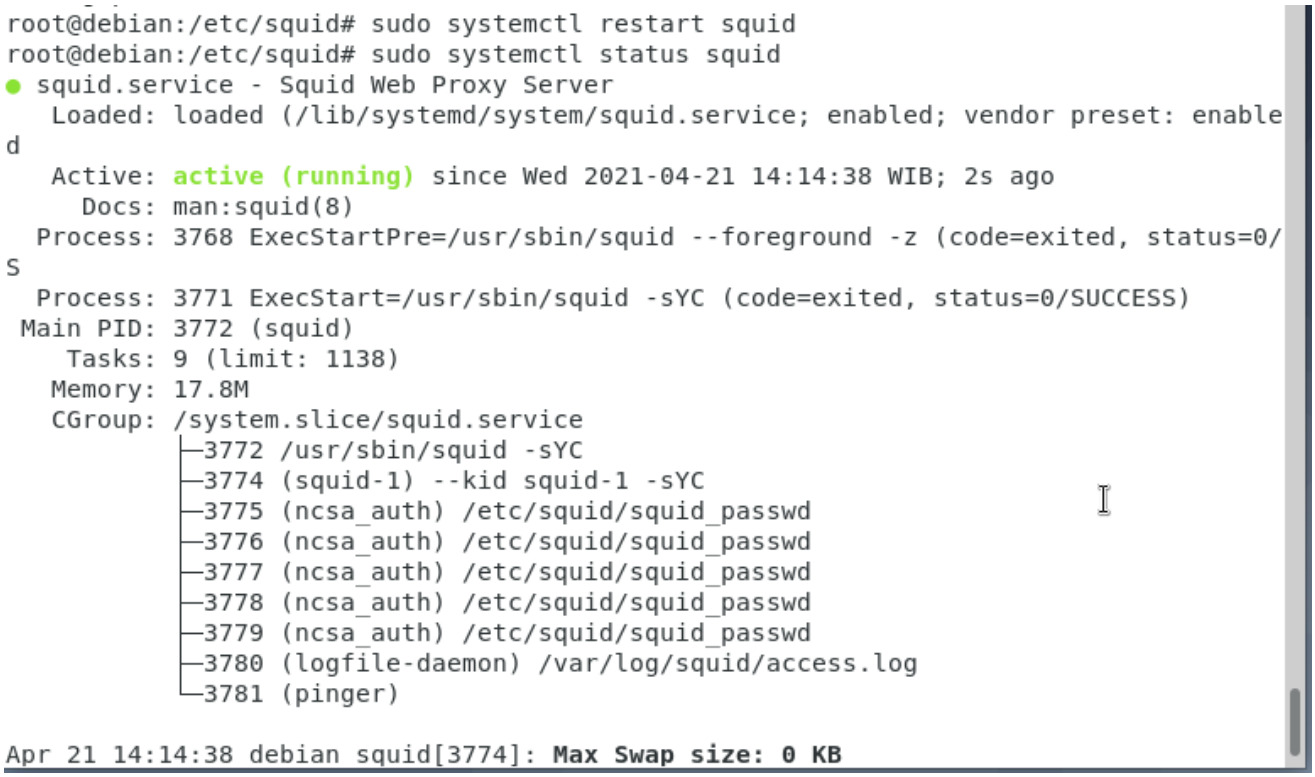
SAVE dengan perintah ^ X Save : yes

CAPTURED :



RESTART Squid dengan perintah: # service squid restart

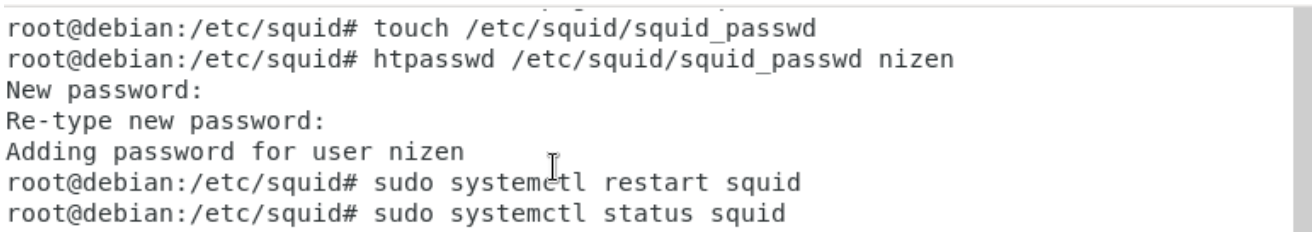
CAPTURED :



Jika ingin memastikan, periksa kembali Squid apakah ada Error dan tetap aktif tidanya.

Konfigurasi untuk membuat Username dan Password untuk keperluan AUTENTIKASI

CAPTURED :



Install apache2 pada Router/Proxy Squid Server

apt-get install apache2-utils

CAPTURED :

```
root@debian:/etc/squid# sudo apt-get install apache2 apache2-utils
Reading package lists... Done
Building dependency tree
Reading state information... Done
apache2 is already the newest version (2.4.38-3+deb10u4).
apache2-utils is already the newest version (2.4.38-3+deb10u4).
0 upgraded, 0 newly installed, 0 to remove and 77 not upgraded.
root@debian:/etc/squid#
```

Buat Username untuk nanti masuk melalui autentikasi dengan perintah :

htpasswd /etc/squid/squid_passwd antoni

Username : nama anda

Password : kelas anda

CAPTURED :

```
root@debian:/etc/squid# htpasswd /etc/squid/squid_passwd nasta
New password:
Re-type new password:
Adding password for user nasta
```

Dilanjutkan perintah :

touch /etc/squid/squid_passwd

```
root@debian:/etc/squid# touch /etc/squid/squid_passwd
```

chown proxy /etc/squid/squid_passwd

```
root@debian:/etc/squid# chown proxy /etc/squid/squid_passwd
```

RESTART Squid : # service squid restart

CAPTURED :

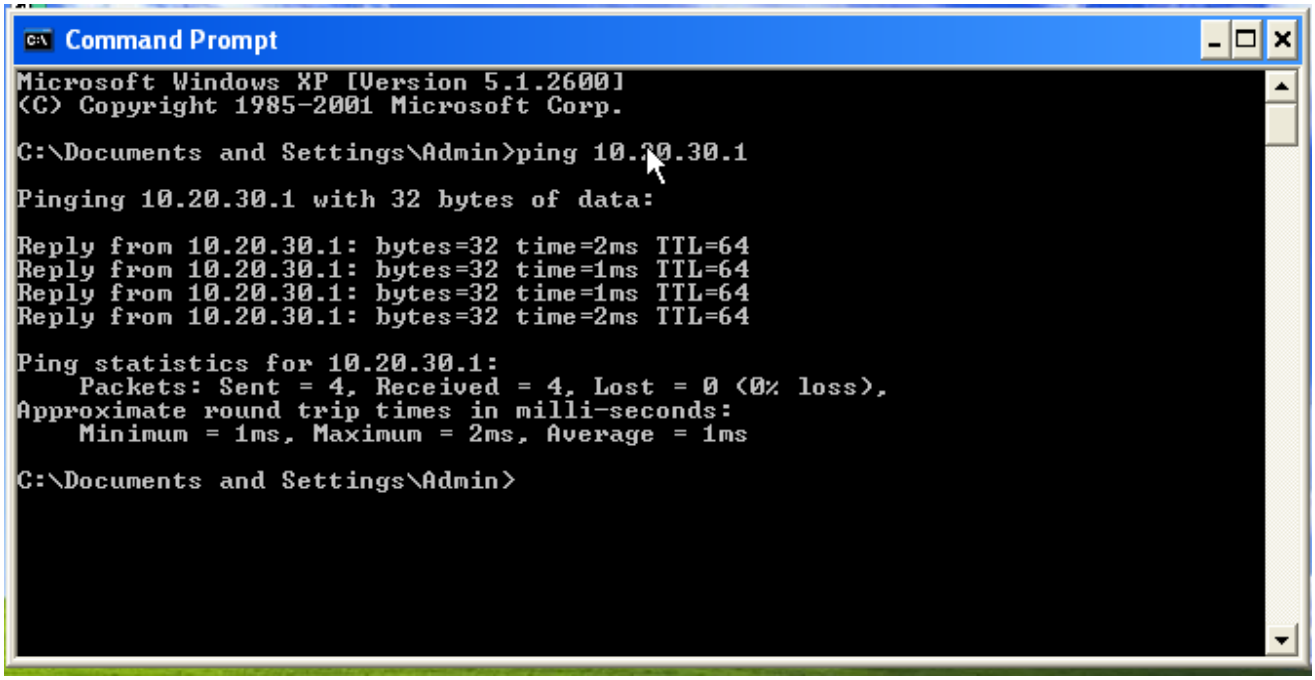
```
root@debian:/etc/squid# sudo systemctl restart squid
root@debian:/etc/squid# sudo systemctl status squid
● squid.service - Squid Web Proxy Server
   Loaded: loaded (/lib/systemd/system/squid.service; enabled; vendor preset: enable
d
   Active: active (running) since Wed 2021-04-21 14:15:51 WIB; 10s ago
     Docs: man:squid(8)
  Process: 3791 ExecStartPre=/usr/sbin/squid --foreground -z (code=exited, status=0/
S
  Process: 3794 ExecStart=/usr/sbin/squid -sYC (code=exited, status=0/SUCCESS)
 Main PID: 3795 (squid)
    Tasks: 9 (limit: 1138)
   Memory: 17.7M
   CGroup: /system.slice/squid.service
           ├─3795 /usr/sbin/squid -sYC
           ├─3797 (squid-1) --kid squid-1 -sYC
           ├─3798 (ncsa_auth) /etc/squid/squid_passwd
           ├─3799 (ncsa_auth) /etc/squid/squid_passwd
           ├─3800 (ncsa_auth) /etc/squid/squid_passwd
           ├─3801 (ncsa_auth) /etc/squid/squid_passwd
           ├─3802 (ncsa_auth) /etc/squid/squid_passwd
           ├─3803 (logfile-daemon) /var/log/squid/access.log
           └─3804 (pinger)
```

3. Lakukan percobaan autentikasi di atas, buatkan penjelasan dan print screen dari kegiatan percobaan !

PENJELASAN :

Sebelum dilakukan pengujian AUTENTIKASI, diantara kedua computer yakni Router/proxy Server (Debian 10) dengan Client (Win XP) dilakukan uji koneksi terlebih dahulu :

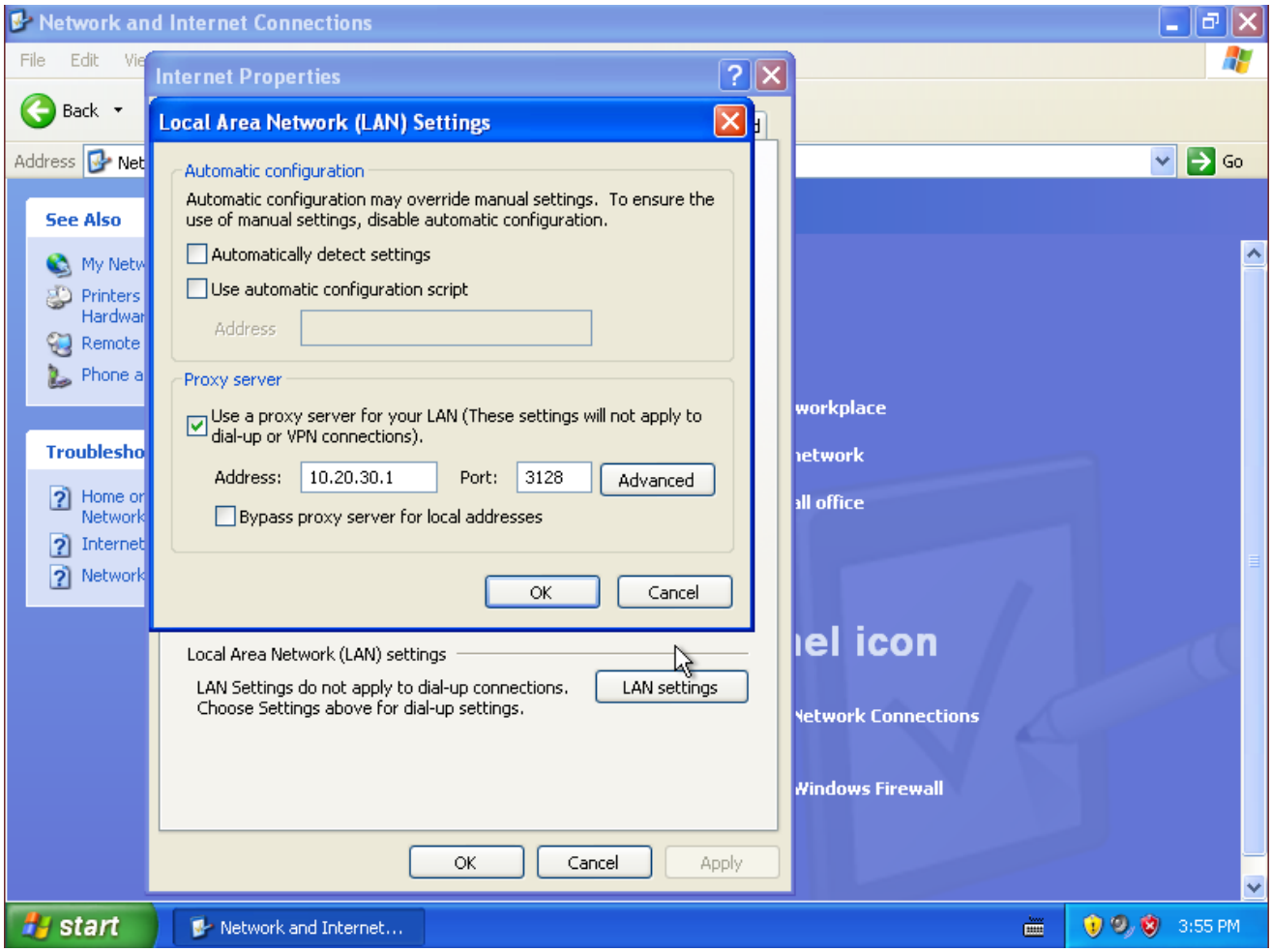
CAPTURED :



Lakukan konfigurasi Proxy pada Browser dari computer Client (Win XP) seperti berikut :

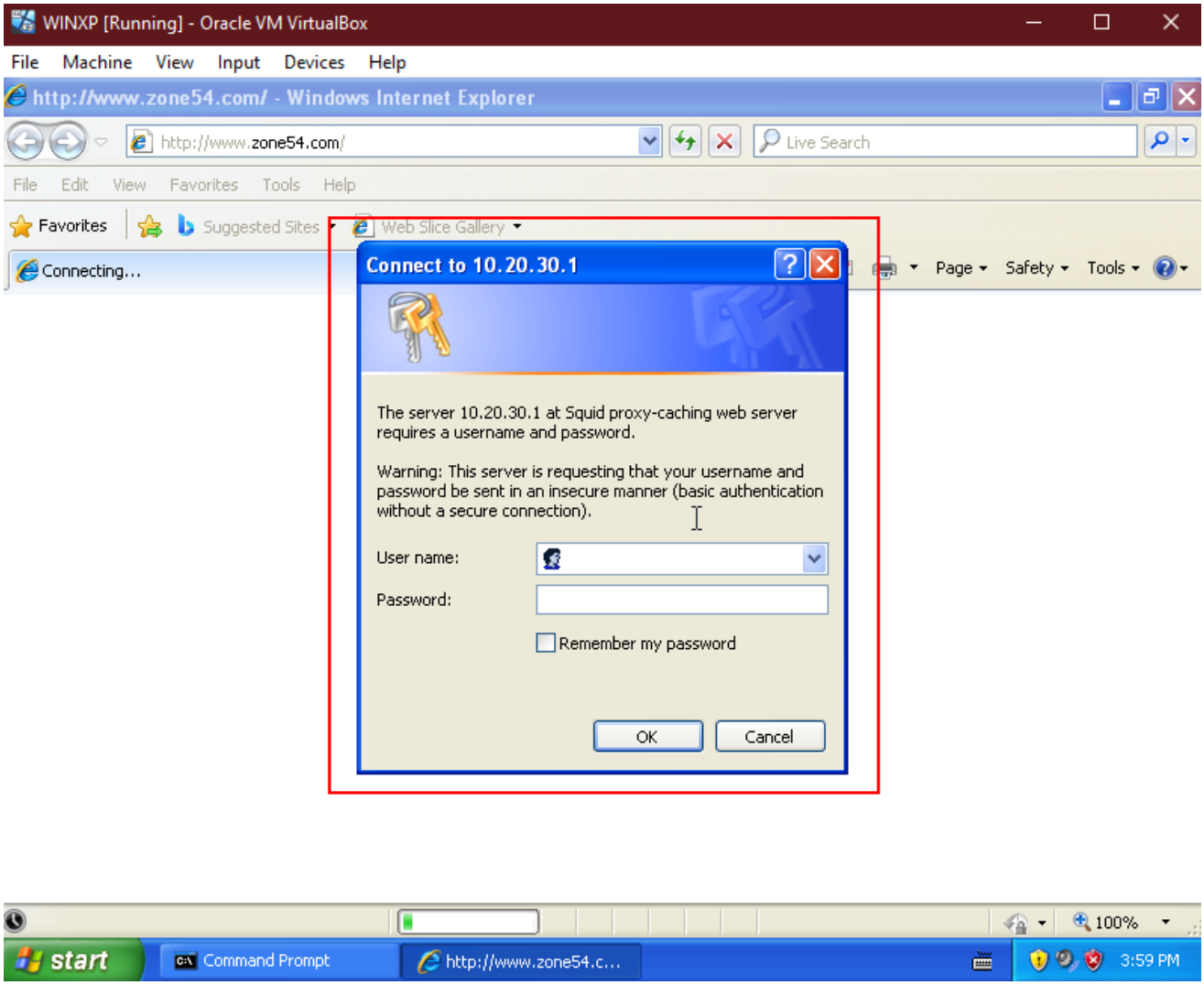
Misal Browser menggunakan “ Internet Explorer “

CAPTURED :



Hasil Tampilan AUTENTIKASI

CAPTURED :

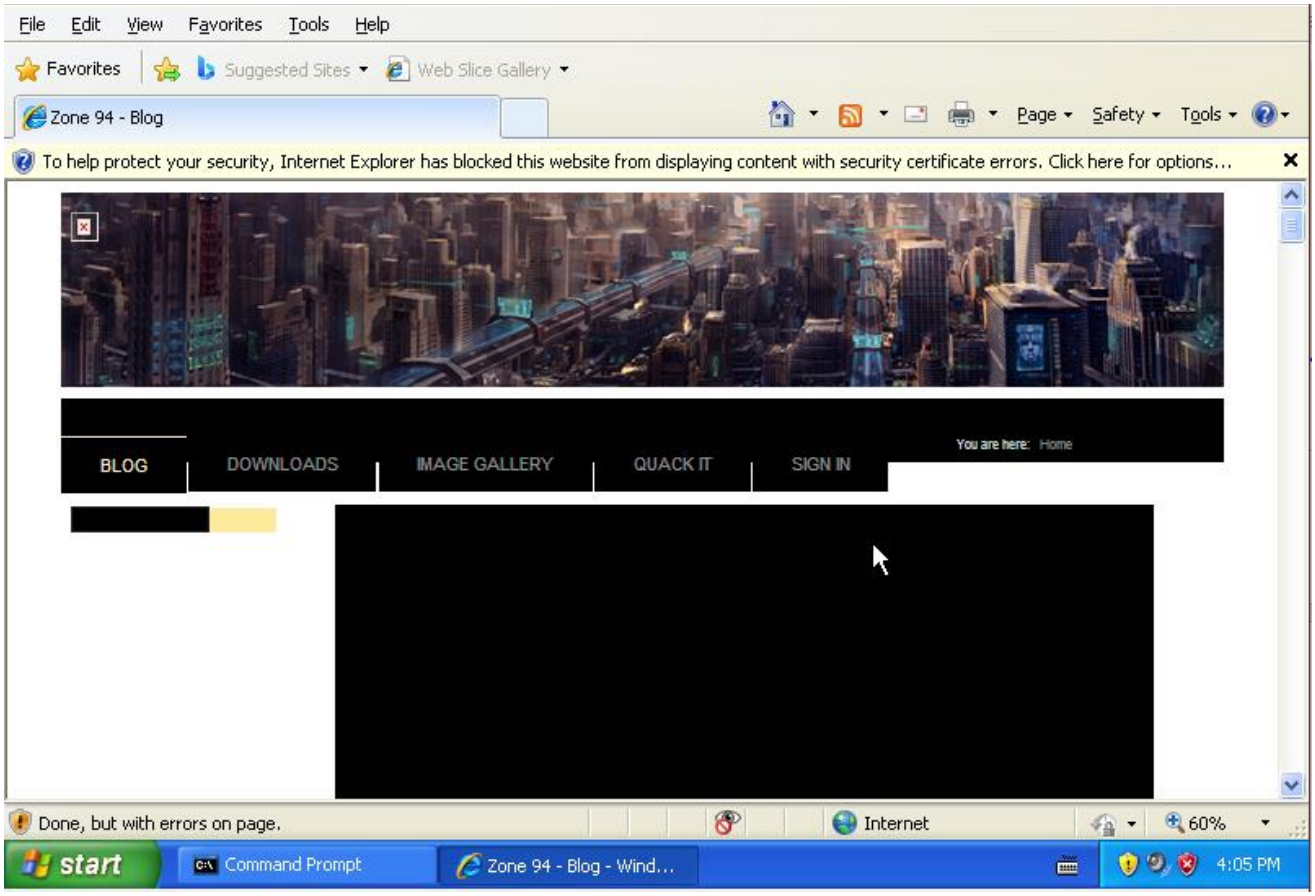


Memasukkan Username dan Password yang benar

CAPTURED :

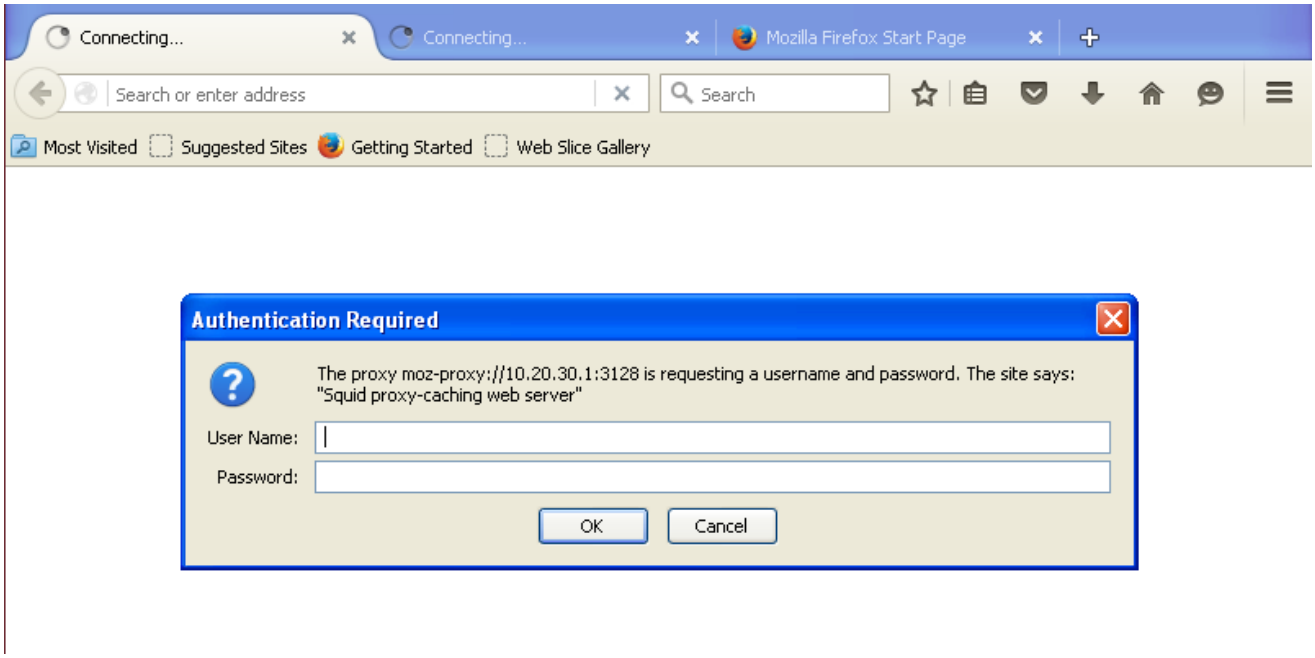
Hasil Tampilan setelah proses AUTENTIKASI

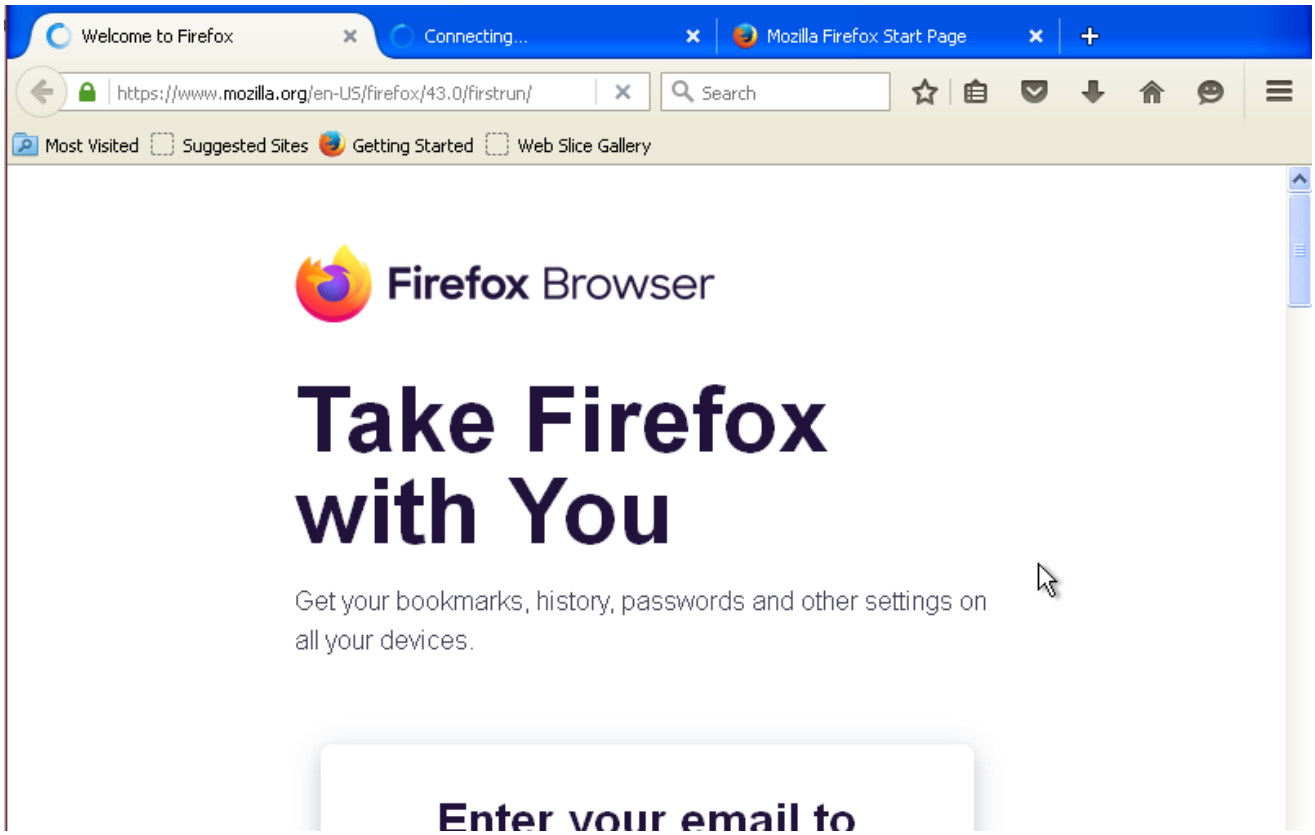
CAPTURED :



Pada Browser misalnya Mozila :

CAPTURED :





(tampilan setelah berhasil login)

4. Berikan kesimpulan dari percobaan tersebut !

KESIMPULAN :

Proxy Squid menyediakan tiga pilihan otentikasi, yaitu :
• otentikasi dasar (Authentication Basic),
• otentikasi intisari (Authentication Digest) dan
• NTLM.
Dalam latihan ini, pengaturan proxy yang digunakan adalah otentikasi dasar. Latihan dimulai dengan membuat topologi dan pemetaan alamat. Selanjutnya, instal paket perangkat lunak untuk otentikasi dasar, Squid3. Setelah menginstal paket, konfigurasi otentikasi dasar akan diterapkan, dan hasilnya ditunjukkan di bawah ini. Pengaturan proxy ini memberikan keamanan yang lebih baik karena tidak semua pengguna dapat mengakses Web atau layanan yang disediakan oleh server. Wajibkan pengguna untuk membuktikan keaslian data mereka dengan memasukkan nama pengguna dan sandi yang cocok dengan akun mereka.
Ketika proses otentikasi dilakukan dan datanya benar, pengguna akan diarahkan ke halaman yang diharapkan, tetapi jika proses otentikasi gagal maka proses otentikasi akan terus berjalan dan pengguna tidak dapat diarahkan ke halaman yang diharapkan. Dengan kata lain, otentikasi ini memastikan bahwa pengunjung layanan adalah pengguna server yang sah, sehingga pengguna / pengunjung yang berwenang dapat mengakses layanan server yang disediakan. Oleh karena itu, dapat dipastikan bahwa pengguna yang tidak sah yang membuat permintaan di server target tidak dapat mengakses layanan di server itu.