



Asignatura:

Sistemas Operativos III

Tema:

HOWTO Y VIDEO (SERVIDOR PROXY SQUID)

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HOW-TO? | Instalando el Servidor Proxy Squid en ClearOS

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En este documento veremos los pasos requerido para habilitar el servicio de proxy en ClearOS - Oracle VirtualBox.

Link a demostración audiovisual: https://youtu.be/8cLD_jtdzIA


Requerimientos del OS:

Tener instalado el programa VirtualBox y tener el OS de ClearOS instalado con los requisitos de hardware virtuales que sean requeridos. Selinux tiene que estar desactivado. Todas las maquinas tienen que estar dentro de una misma red interna y los clientes ya deben de estar dentro de un dominio.

Paso 1 – Instalar el servicio de Proxy.

Con el comando **yum install squid httpd-tools** descargamos e instalamos el servicio de Proxy Squid en el Servidor de ClearOS.

```
[root@samba4 home]# yum install squid httpd-tools
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: linorg.usp.br
 * epel: mirrors.mit.edu
 * extras: mirror.arizona.edu
 * updates: mirror.facom.ufms.br
Package 7:squid-3.5.20-12.el7_6.1.x86_64 already installed and latest version
Package httpd-tools-2.4.6-90.el7.centos.x86_64 already installed and latest version
Nothing to do
[root@samba4 home]# _
```



Paso 2 – Iniciar el servicio de Proxy.

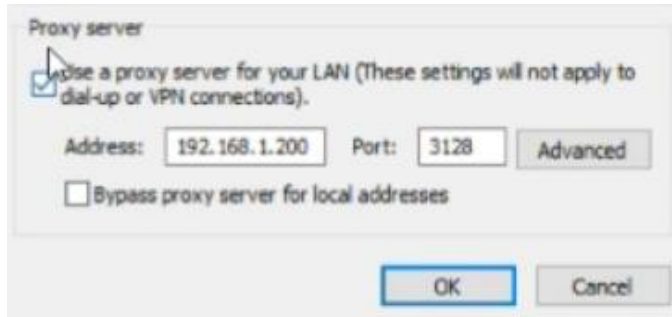
Utilizando el comando **systemctl start squid** y **systemctl enable squid** iniciaremos y habilitaremos el servicio para que funcione onboot.

```
[root@samba4 home]# systemctl start squid
[root@samba4 home]# systemctl status squid
■ squid.service - Squid caching proxy
   Loaded: loaded (/usr/lib/systemd/system/squid.service; disabled; vendor preset: disabled)
   Active: active (running) since Tue 2020-03-31 22:21:00 EDT; 5min ago
     Process: 2386 ExecStart=/usr/sbin/squid $SQUID_OPTS -f $SQUID_CONF (code=exited, status=0/SUCCESS)
     Process: 2381 ExecStartPre=/usr/libexec/squid/cache_swap.sh (code=exited, status=0/SUCCESS)
    Main PID: 2388 (squid)
      CGroup: /system.slice/squid.service
              └─2388 /usr/sbin/squid -f /etc/squid/squid.conf
                  └─2390 (squid-1) -f /etc/squid/squid.conf
                      └─2391 (logfile-daemon) /var/log/squid/access.log
```

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Paso 4 – Agregar el servicio de proxy al pc cliente.

En opciones de internet> opciones de LAN seleccionaremos la opción de proxy y añadiremos la ip del servidor y el puerto 3128.



Paso 5 – Anadir reglas en el archivo squid.conf.

Utilizamos el comando nano /etc/squid/squid.conf para comenzar a añadir reglas al archivo de proxy.

Bloquear una subred:

```
acl lan src "subnet"/"Mascara de red"\  
https_access deny lan
```

Bloquear dominio de la red:

```
acl ban dstdomain "página web a bloquear"  
http_access deny all ban
```

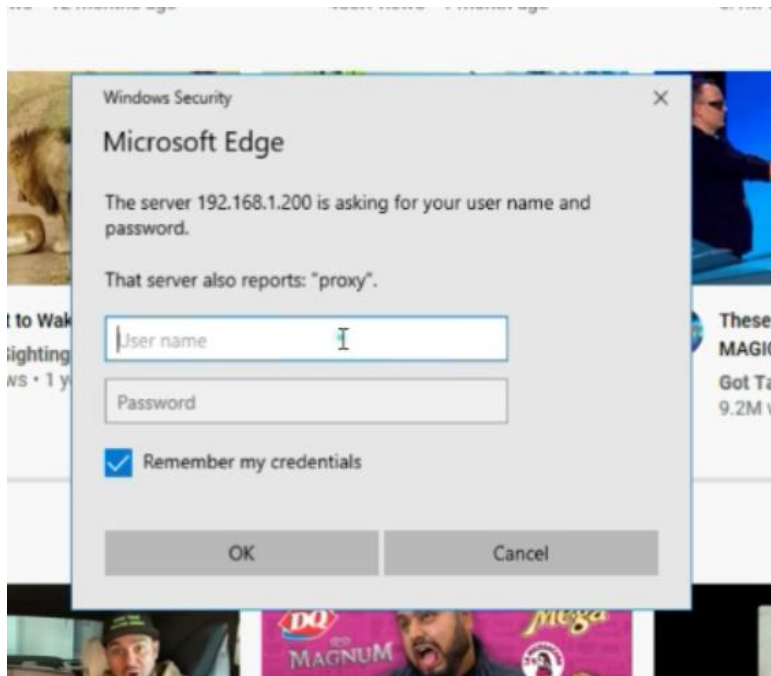
Bloquear el acceso a la red por X cantidad de tiempo:

```
acl day time T "hora"- "hora"  
https_access deny day
```

Bloquear a un usuario de dominio de Samba 4:

```
auth_param basic program /usr/lib64/squid/basic_ldap_auth -P -R -b  
"dc=(dominio),dc=(dominio superior)" -D "cn=(nombre del usuario a  
bloquear),cd=(dominio),dc=(dominio superior)" -w "contraseña para que el usuario  
utilizara para navegar en la web" -f sAMAccountName=% -h "ip del servidor"  
auth_param basic realm proxy  
acl local proxy_auth REQUIRED src "red/mascara"  
http_access allow local
```

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Bloquear un PC por su mac address:


Acl mac_addr arp "MAC del PC a bloquear"
http_access deny mac_acl

Instalar SARG.

Paso 1 – Descargar los archivos necesarios para el funcionamiento de SARG.

Utilizamos el comando **yum install gcc gd gd-devel make perl-GD httpd** para instalar los archivos necesarios para la instalación de sarg.

```
[root@samba4 home]# yum install gcc gd gd-devel make perl-GD httpd
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: linorg.usp.br
 * epel: linux-mirrors.fnal.gov
 * extras: mirror.arizona.edu
 * updates: mirror.facom.ufms.br
Package gcc-4.8.5-39.el7.x86_64 already installed and latest version
Package gd-2.0.35-26.el7.x86_64 already installed and latest version
Package gd-devel-2.0.35-26.el7.x86_64 already installed and latest version
Package 1:make-3.82-24.el7.x86_64 already installed and latest version
Package perl-GD-2.49-3.el7.x86_64 already installed and latest version
Package httpd-2.4.6-90.el7.centos.x86_64 already installed and latest version
Nothing to do
[root@samba4 home]# nano /etc/httpd/conf/
```



Paso 2 – Editar el archivo de httpd.conf.

Con el comando **nano /etc/httpd/conf/httpd.conf** abriremos el archivo de configuración del servicio http; editaremos la siguiente línea: DocumentRoot “/var/www/html/squid-reports”

Paso 3 – Iniciar el Servicio HTTP.

Para iniciarlo utilizamos el comando **systemctl start httpd**.

```
■ httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Tue 2020-03-31 23:27:43 EDT; 5s ago
     Docs: man:httpd(8)
           man:apachectl(8)
  Process: 3217 ExecStop=/bin/kill -WINCH ${MAINPID} (code=exited, status=0/SUCCESS)
 Main PID: 3221 (httpd)
   Status: "Processing requests..."
    CGroup: /system.slice/httpd.service
            └─3221 /usr/sbin/httpd -DFOREGROUND
              └─3222 /usr/sbin/httpd -DFOREGROUND
                └─3223 /usr/sbin/httpd -DFOREGROUND
                  └─3224 /usr/sbin/httpd -DFOREGROUND
                    └─3225 /usr/sbin/httpd -DFOREGROUND
                      └─3226 /usr/sbin/httpd -DFOREGROUND
```

Paso 4 – Descargar y Descomprimir el source de SARG.

```
[root@samba4 ~]# wget http://liquidtelecom.dl.sourceforge.net/project/sarg/sarg/sarg-2.3.10/sarg-2.3.10.tar.gz
--2020-03-31 23:29:16-- http://liquidtelecom.dl.sourceforge.net/project/sarg/sarg/sarg-2.3.10/sarg-2.3.10.tar.gz
Resolving liquidtelecom.dl.sourceforge.net (liquidtelecom.dl.sourceforge.net)... 197.155.77.8
Connecting to liquidtelecom.dl.sourceforge.net (liquidtelecom.dl.sourceforge.net)|197.155.77.8|:80..
. connected.
HTTP request sent, awaiting response... 200 OK
Length: 1270660 (1.2M) [application/x-gzip]
Saving to: 'sarg-2.3.10.tar.gz'

100%[=====>] 1,270,660 484KB/s in 2.6s

2020-03-31 23:29:19 (484 KB/s) - 'sarg-2.3.10.tar.gz' saved [1270660/1270660]

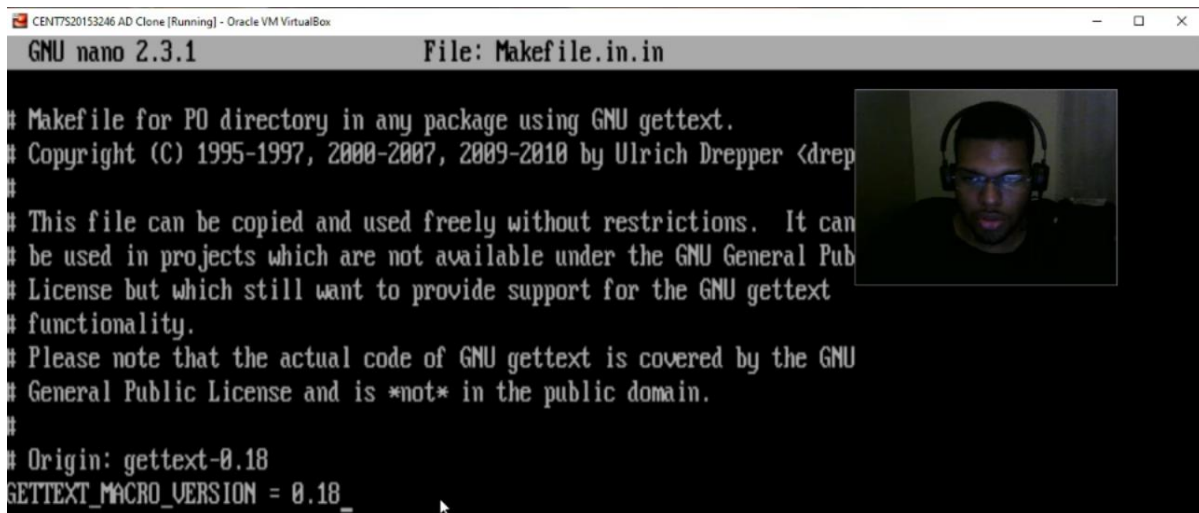
[root@samba4 ~]# tar -zxvf
```

Paso 4 – Desplazarse al directorio de SARG> PO.

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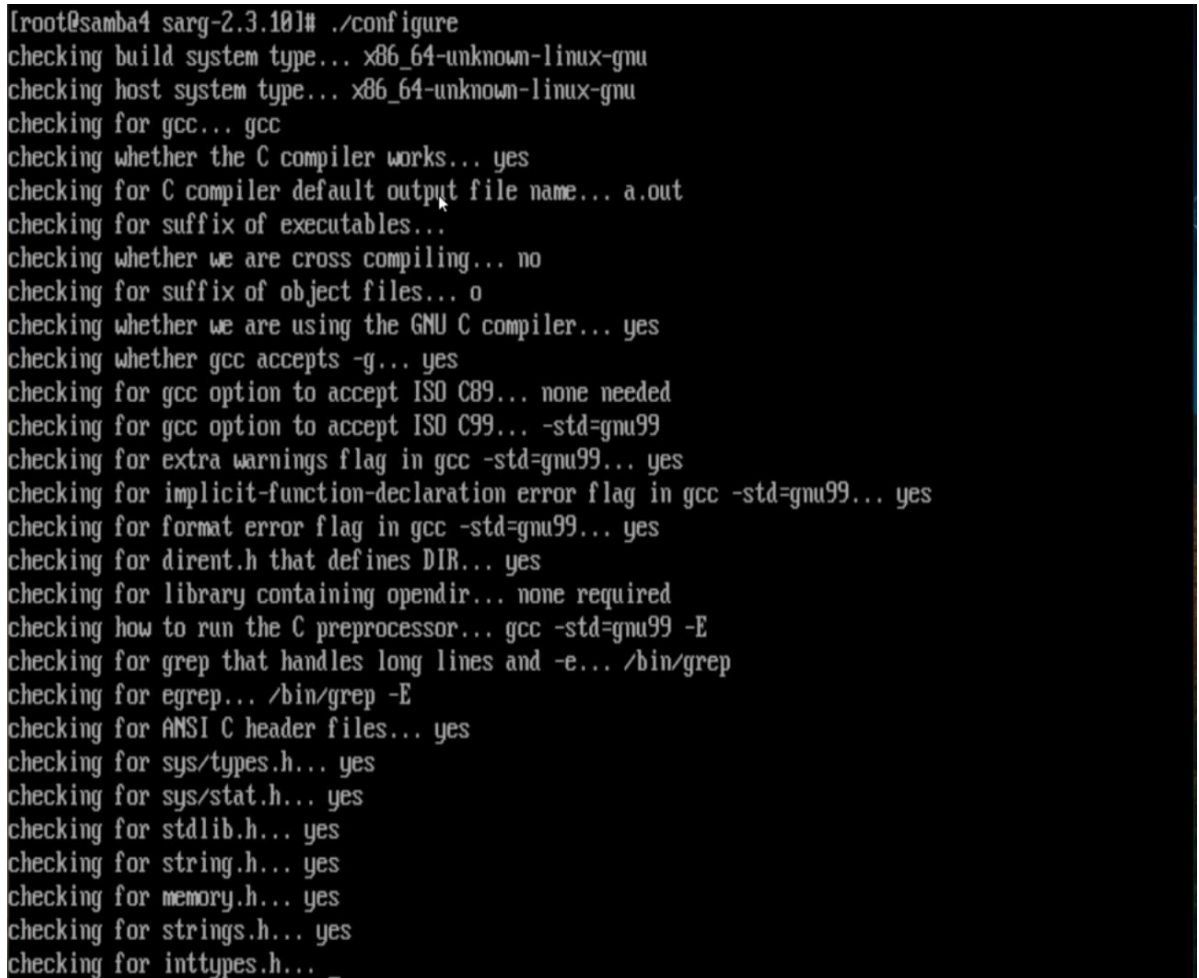
Paso 5 – Editar el archivo Makefile.in.in

Utilizando el comando nano editaremos la versión del GETTEXT, de ver=0.18 a ver=0.19



```
CENTOS20153246 AD Clone [Running] - Oracle VM VirtualBox
GNU nano 2.3.1 File: Makefile.in.in
# Makefile for PO directory in any package using GNU gettext.
# Copyright (C) 1995-1997, 2000-2007, 2009-2010 by Ulrich Drepper <dreppe013@redhat.com>
#
# This file can be copied and used freely without restrictions. It can
# be used in projects which are not available under the GNU General Pub
# License but which still want to provide support for the GNU gettext
# functionality.
# Please note that the actual code of GNU gettext is covered by the GNU
# General Public License and is *not* in the public domain.
#
# Origin: gettext-0.18
GETTEXT_MACRO_VERSION = 0.18_
```

Paso 6 – Retroceder con el comando cd .. y compilar el software.

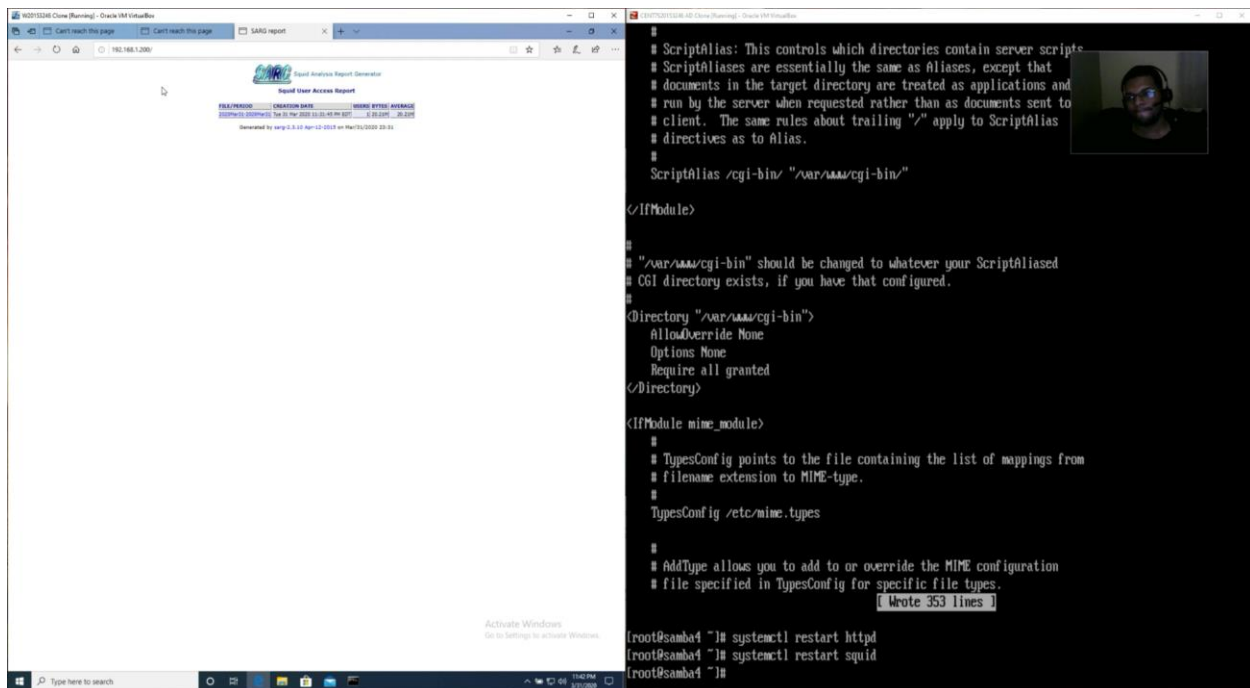


```
[root@samba4 sarg-2.3.10]# ./configure
checking build system type... x86_64-unknown-linux-gnu
checking host system type... x86_64-unknown-linux-gnu
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking for gcc option to accept ISO C89... none needed
checking for gcc option to accept ISO C99... -std=gnu99
checking for extra warnings flag in gcc -std=gnu99... yes
checking for implicit-function-declaration error flag in gcc -std=gnu99... yes
checking for format error flag in gcc -std=gnu99... yes
checking for dirent.h that defines DIR... yes
checking for library containing opendir... none required
checking how to run the C preprocessor... gcc -std=gnu99 -E
checking for grep that handles long lines and -e... /bin/grep
checking for egrep... /bin/grep -E
checking for ANSI C header files... yes
checking for sys/types.h... yes
checking for sys/stat.h... yes
checking for stdlib.h... yes
checking for string.h... yes
checking for memory.h... yes
checking for strings.h... yes
checking for inttypes.h... _
```


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```
SARG:      Keep temporary files (-k) = No
SARG:      Input log (-l) = /var/log/squid/access.log
SARG:      Resolve IP Address (-n) = No
SARG:      Output dir (-o) = /var/www/html/squid-reports/
SARG: Use Ip Address instead of userid (-p) = No
SARG:      Accessed site (-s) =
SARG:      Time (-t) =
SARG:      User (-u) =
SARG:      Temporary dir (-w) = /tmp/sarg
SARG:      Debug messages (-x) = Yes
SARG:      Process messages (-z) = No
SARG: Previous reports to keep (--lastlog) = 0
SARG:
SARG: SARG version: 2.3.10 Apr-12-2015
SARG: Reading access log file: /var/log/squid/access.log
SARG: Records in file: 373, reading: 100.00%
SARG:  Records read: 373, written: 373, excluded: 0
SARG: Squid log format
SARG: Period: 2020 Mar 31
SARG: Sorting log /tmp/sarg/192_168_1_208.user_unsort
SARG: Making file /tmp/sarg/192_168_1_208
SARG: Sorting file "/tmp/sarg/192_168_1_208.utmp"
SARG: Making report 192.168.1.208
SARG: Making index.html
SARG: Successful report generated on /var/www/html/squid-reports/2020Mar31-2020Mar31
SARG: Purging temporary file sarg-general
SARG: End
[root@samba4 sarg-2.3.10]# reb
```

Paso 7 – abrir el servicio desde el navegador del equipo cliente.



The screenshot shows a web browser window displaying a Squid User Access Report. The report is titled "SARG User Access Report" and includes a table with columns for "FILE/URI", "CREATION DATE", "REQUESTED BY", and "REQUESTED BY". The report is generated by SARG 2.3.10 on April 12, 2020, at 20:31. The browser window also shows a "Cart" icon and a "SARG report" tab.

Below the browser window, a terminal window shows the configuration of the httpd and squid services. The configuration includes the following lines:

```
# ScriptAlias: This controls which directories contain server scripts
# ScriptAliases are essentially the same as Aliases, except that
# documents in the target directory are treated as applications and
# run by the server when requested rather than as documents sent to
# client. The same rules about trailing "/" apply to ScriptAlias
# directives as to Alias.
#
ScriptAlias /cgi-bin/ "/var/www/cgi-bin/"

</IfModule>

"/var/www/cgi-bin" should be changed to whatever your ScriptAliased
CGI directory exists, if you have that configured.

<Directory "/var/www/cgi-bin">
    AllowOverride None
    Options None
    Require all granted
</Directory>

<IfModule mime_module>
#
# TypesConfig points to the file containing the list of mappings from
# filename extension to MIME-type.
#
TypesConfig /etc/mime.types
#
# AddType allows you to add to or override the MIME configuration
# file specified in TypesConfig for specific file types.
#
# Write 353 lines

[root@samba4 ~]# systemctl restart httpd
[root@samba4 ~]# systemctl restart squid
[root@samba4 ~]#
```