Acrylic dns and privoxy web proxy services installation and configuration.

Carlos Gerez

Acrylic dns.

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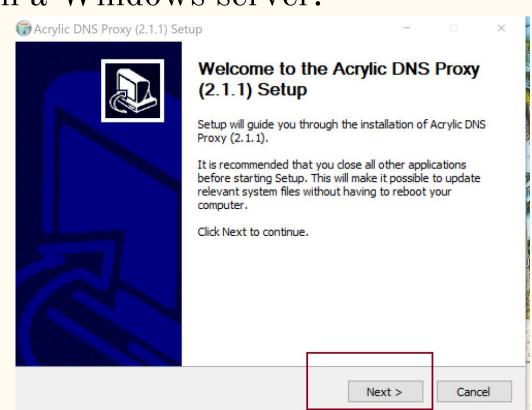
Use your browser to go to:

https://sourceforge.net
/projects/acrylic/

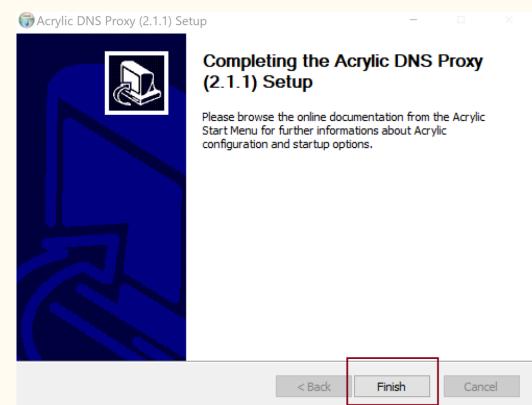
This is the download page for Acrylic.



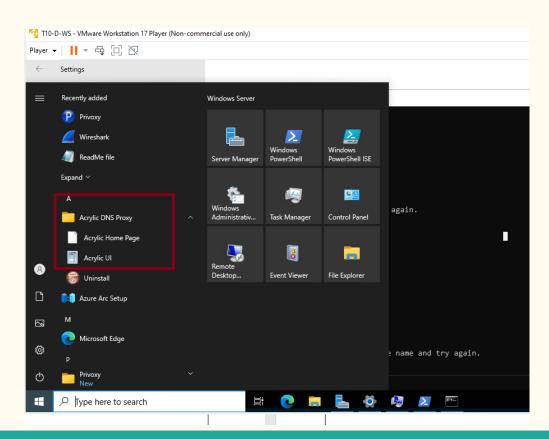
After download open the installation file and follow the steps.



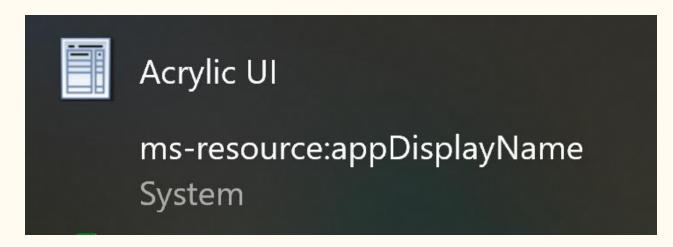
Use all the default configurations presing next in each window until finish.



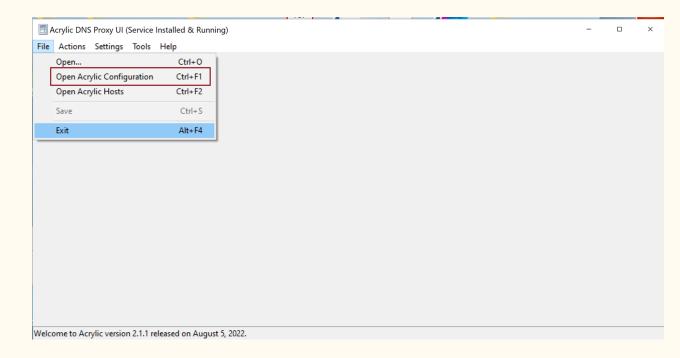
Upon finishing you will have the app in your app list.



The new app on your list of apps on windows is called Acrylic UI.
Open the app.



This page is the UI for acrylic. Select file, and open Acrylic Configuration to configure Acrylic on this computer.



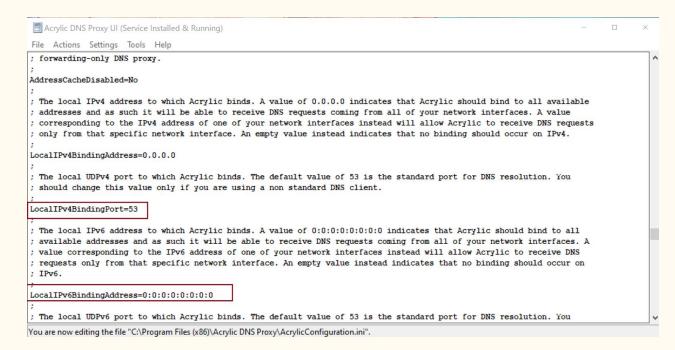
Go to the last line of the file and add under the AllowedAddressSection the ip address from your computer. All the lines that start with; are commented lines and will not be used by the app.

```
Acrylic DNS Proxy UI (Service Installed & Running)
File Actions Settings Tools Help
; allowed) from which can come requests that Acrylic is allowed to handle. You have to specify a different key name for
 each entry, like in the following example:
 [AllowedAddressesSection]
; IP1=192.168.45.254 -- A single IP address
 IP2=192.168.44.100 -- Another single IP address
; IP3=192.168.100.* -- All addresses starting with 192.168.100
; IP4=172.16.* -- All addresses starting with 172.16
: Although not recommended for security reasons you can also allow Acrylic to handle requests coming from any IP
 address, like in the following example:
 [AllowedAddressesSection]
 TP1=*
; You must also create a firewall rule to allow incoming traffic directed to the two Acrylic executables:
 "AcrylicService.exe" and "AcrylicConsole.exe".
[AllowedAddressesSection]
```

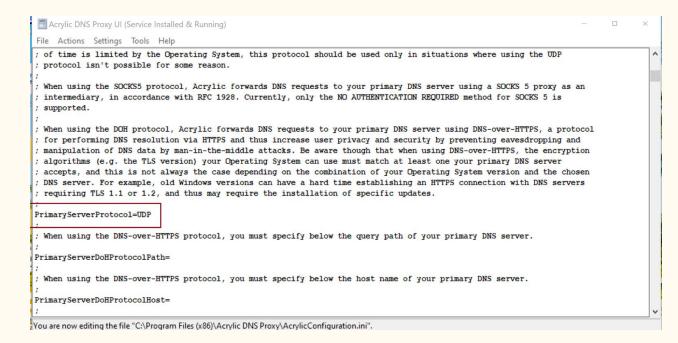
Go to the last line of the file and add under the Allowed Address Section the ip address that you will allow to receive requests from, in this case the * means all the machines on that subnet.

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T10-D-WS - VMware Workstation 17 Player (Non-commercial use only)
Plaver ▼ I II ▼ 母 □ 汉
Acrylic DNS Proxy UI (Service Installed & Running)
File Actions Settings Tools Help
; the system is shutdown, therefore you might experience a delay from when a DNS request or response is received to when
; its details get written into the hit log.
HitLogMaxPendingHits=512
 ALLOWING REQUESTS FROM OTHER COMPUTERS
 Although for security reasons the default behaviour of Acrylic is to refuse to handle requests coming from other
 computers, it is possible to specify below in the AllowedAddressesSection a list of IP addresses (wildcards are
 allowed) from which can come requests that Acrylic is allowed to handle. You have to specify a different key name for
 each entry, like in the following example:
 [AllowedAddressesSection]
: IP1=192.168.45.254 -- A single IP address
; IP2=192.168.44.100 -- Another single IP address
; IP3=192.168.100.* -- All addresses starting with 192.168.100
; IP4=172.16.* -- All addresses starting with 172.16
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 [AllowedAddressesSection]
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: You must also create a firewall rule to allow incoming traffic directed to the two Acrylic executables:
: "AcrylicService.exe" and "AcrylicConsole.exe".
[AllowedAddressesSection]
TP1=192.168.203.*
IP2=192.168.202.*
IP3=192.168.201.*
Volume pow editing the file "C-\ Program Files (v.86)\ Acadic DNS Provy\ Acadic Configuration ini
```

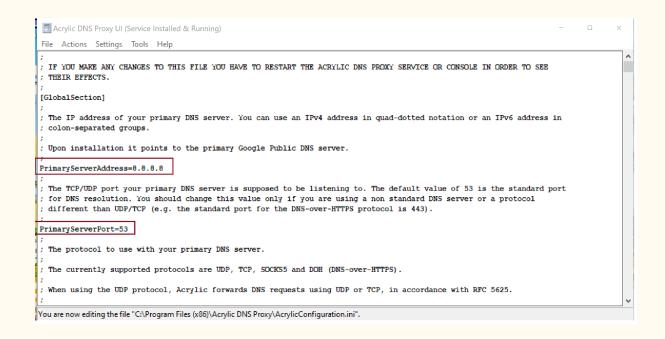
There are several other configurations lines in this file that is good to know. In the LocalIPv4BindingPort, the number 53 means that is the port used by this application.



Primary protocol used in default is UDP.
There are more allowed protocol listed in the file in the previous lines.



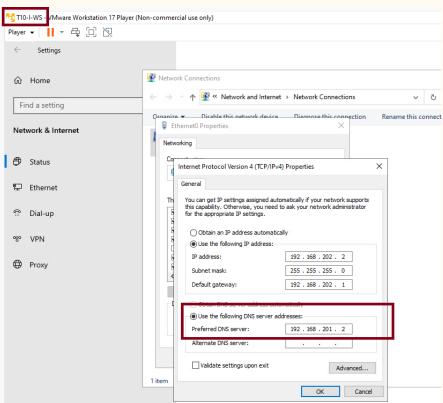
Here is defined the primary server that resolve the addresses, and the primary server port.



Using the dns service from a computer in the intern zone.

**Ind-I-WS-/Mware Workstation 17 Player (Non-commercial use only)

Here we change the dns on a machine to get their dns from the machine in the DMZ.



Testing the dns service resolution.

On a windows powershell we can use nslookup to resolve yahoo.com and receive the addresses of servers linked to that domain. In the top is the server that resolve those addresses on the DMZ.

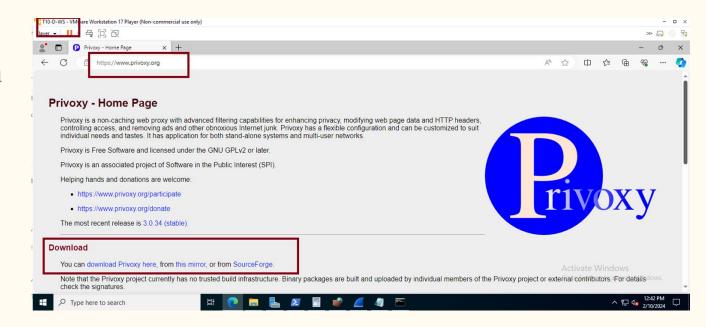
```
Windows PowerShell
PS C:\Users\cgarcia> nslookup yahoo.com
Server: UnKnown
Address: 192.168.201.2
Non-authoritative answer:
         yahoo.com
Name:
Addresses:
            2001:4998:24:120d::1:0
          2001:4998:124:1507::f001
          2001:4998:44:3507::8000
          2001:4998:44:3507::8001
          2001:4998:124:1507::f000
          2001:4998:24:120d::1:1
          74.6.231.21
          74.6.143.25
          74.6.143.26
          74.6.231.20
          98.137.11.164
          98.137.11.163
```

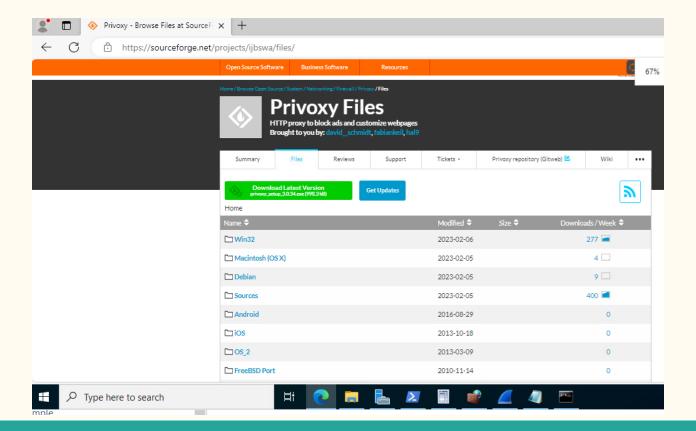
privoxy web proxy services installation and configuration.

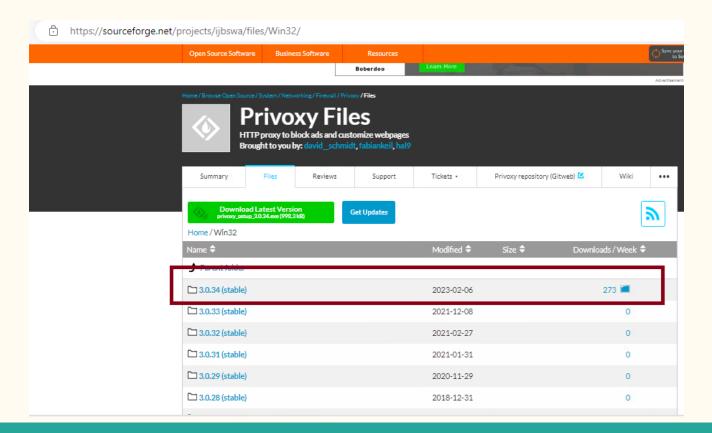
Carlos Gerez

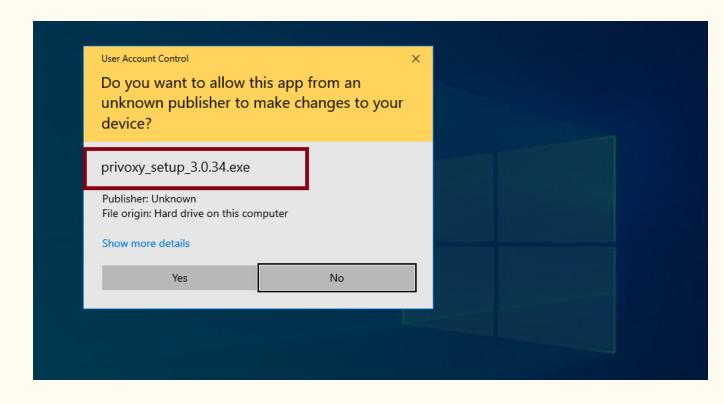
On a browser on the computer in that you want to install the service search for http://www.privoxy.org/

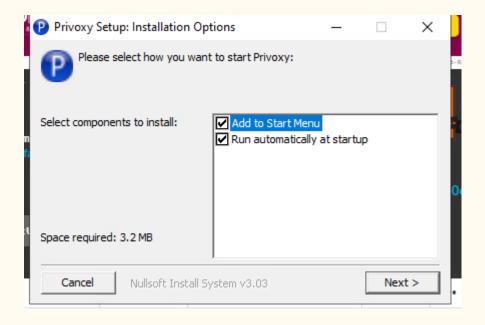
Select download from SourceForge.

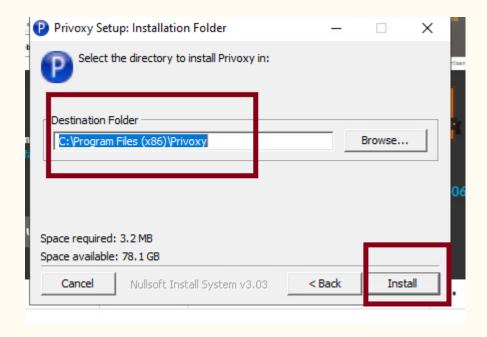


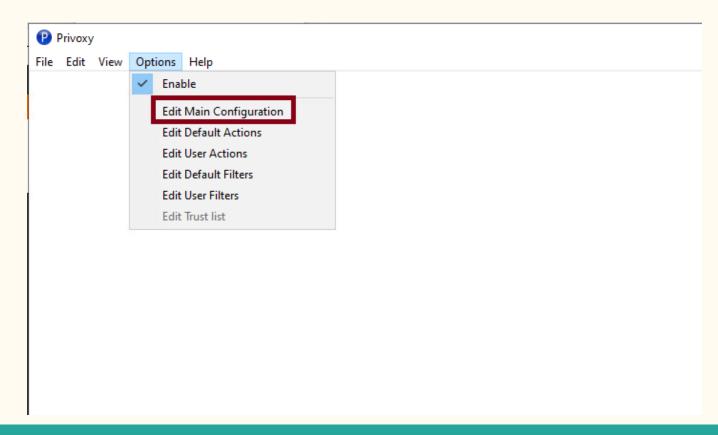




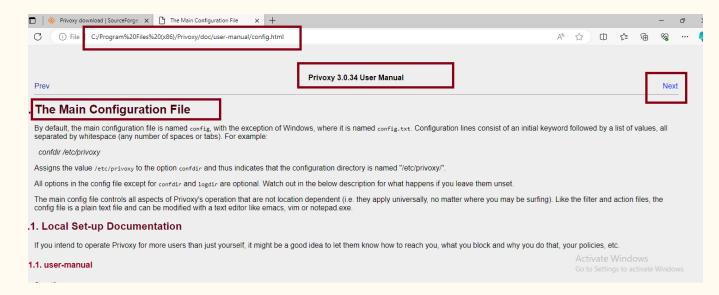




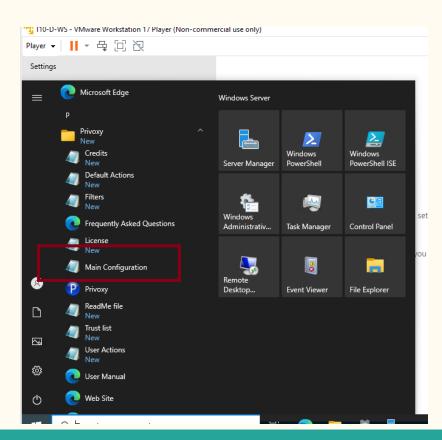




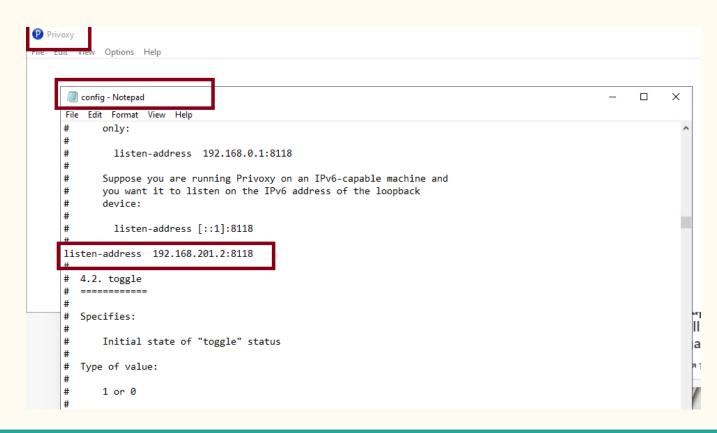
Upon open the app one can look in the web page the configuration options.



A more simple option is to open the main configuration file with administrative privileges, and edit the necessary configurations.

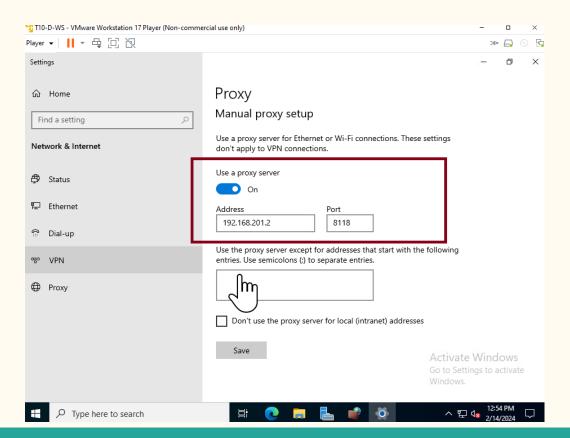


This is the only change necessary to provide web services with privoxy. In the uncommented line listen-address add the address of the computer were the service run, and the listening port used for privoxy (8118)

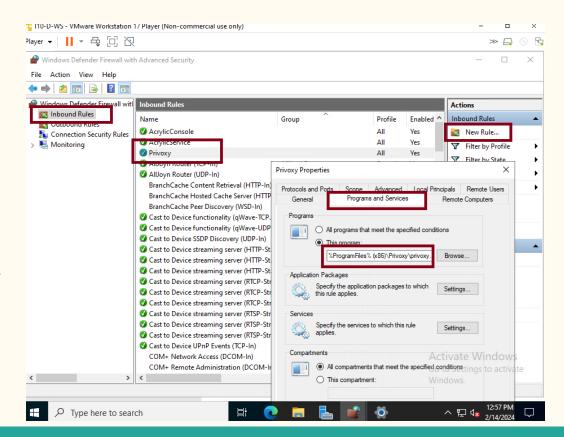


Privoxy configuration in a Windows computer.

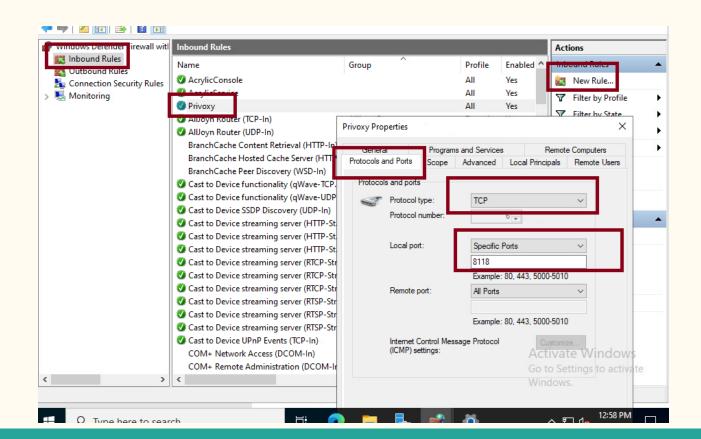
On settings go to proxy and change use a proxy server to on and add the address and listening port.



You must allow the service to receive request by creating a new rule in windows defender with advance security in windows. Create the rule to give access to privoxy by adding the path to the executable in your computer by browsing to it.

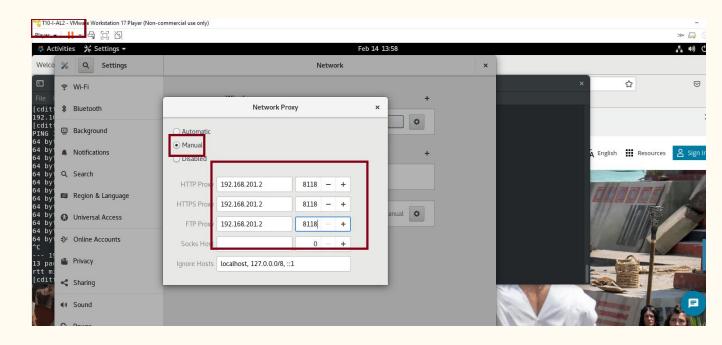


The protocols of the rule must be TCP and the port 8118. If you are not sure of this settings can edit the rule and change the configuration of the rule to match this.



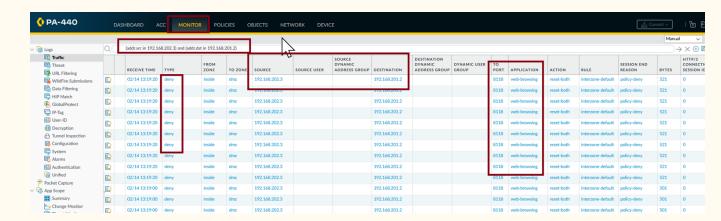
Privoxy configuration in a Alma Linux server.

Go to settings, and on network proxy change to the address that host privoxy and the listening port. Upon change this stop and start the service network to be sure the changes are updated.



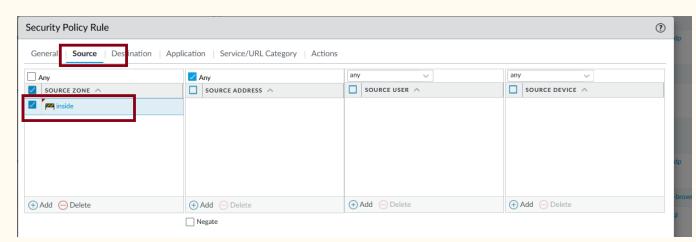
Testing the service.

The service shows problems between zones. In the Palo Alto monitor we can see many deny request. We must create a rule to allow those request to go trough.



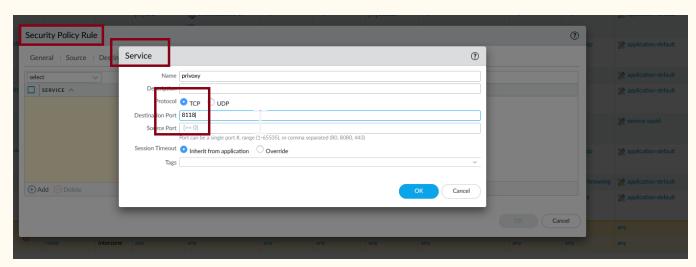
firewall.

A new rule with source in intern and destination to DMZ will provide access to privoxy. Open on Palo Alto the policy tab and create a new policy.



firewall.

In the service tab create a new service call privoxy, that will use TCP and port 8118.



After the configuration changes if you look into objects you could see the new privoxy service object configuration.

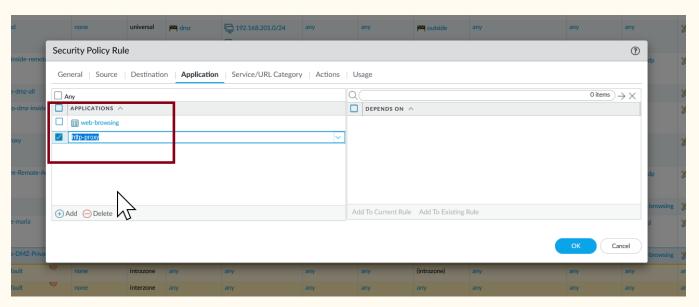


When trying again the web server, communications were deny but because another service is required, http-proxy.

												1				Manual		
Q	(addr.src in 192.1	58.202.3) and (a	FROM	8.201.2)	course	COURSE HEER	SOURCE DYNAMIC	0.000	DESTINATION DYNAMIC	DYNAMIC USER	TO		A CTION	2005	SESSION END REASON	BYTES	HTTP CONN SESSI	
	02/14 13:32:20	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	http-proxy	deny	interzone-default	policy-deny	503	0	
	02/14 13:32:20	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	http-proxy	deny	interzone-default	policy-deny	529	0	
	02/14 13:32:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	http-proxy	deny	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	
1	02/14 13:31:05	deny	inside	dmz	192.168.202.3			192.168.201.2			8118	web-browsing	reset-both	interzone-default	policy-deny	521	0	

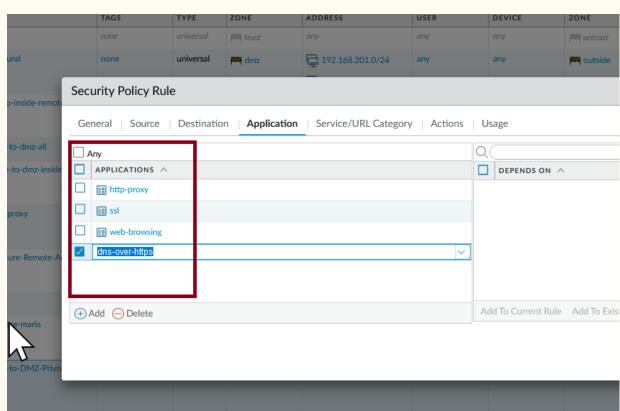
firewall.

If you allow the service maybe it can allow the privoxy service to work. In the policy rule for privoxy add the service required.



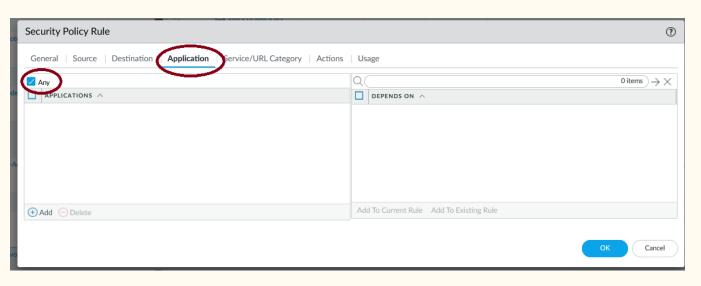
firewall.

After commit the changes and try again another services were asked until we reached to add 4 services, and still a new one was required.



firewall.

Don't do what was showing before. Instead is more useful to use the "any" option in the Application tab of the policy rule. That will allow all necessary protocoles. That change give access to the web service.

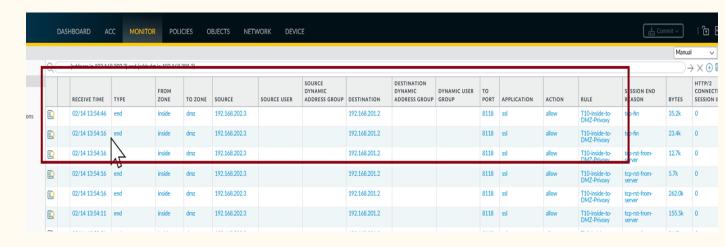


firewall.

The same problem needs solution for the secure zone. Adding the interconnected zone as a new source to the already working rule for privoxy solved communications between the secure and the dmz zone.



Now traffic to the secure and intern zone is allowed for the privoxy services.



Working configuration from the intern zone

This is the proxy configuration on the Alma Linux machine in the intern zone, that now have web services provided by privoxy using port 8118 from the DMZ zone.

