

# Serviços de Rede 1 – **Lesson 10 - Practices**

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## Exercise 1 - Proxy in Windows environment

# Exercise

- Your company wants to install a Proxy server ensuring that all customers only access the Internet via this server.
- The topology is as follows:



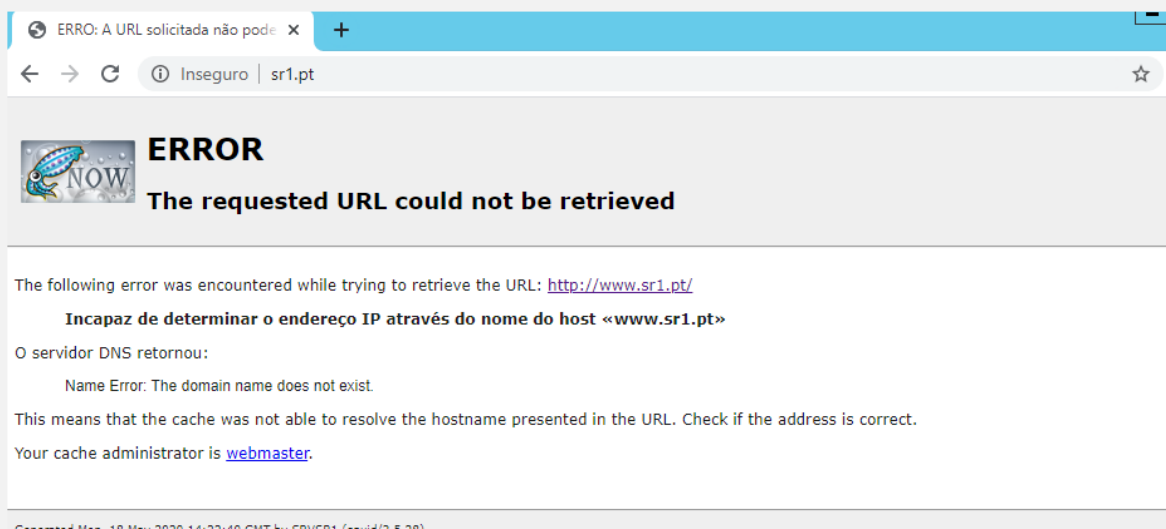
- Test if your Windows server has access to the Internet.
- Test if your Windows client has access to the Internet.

# Exercise

- Your company wants to install a Proxy server ensuring that all clients only access the Internet via this server.
- Test if your Windows client can access the Internet.
- Download Squid proxy (<http://squid.diladele.com/>)
- Install Squid on the server.
- Configure the proxy browser in the client browser.
- Test if you still have Internet access.
- Write in the address bar `www.sr1.pt`. Must give an error ... Who reported this error?

# Exercise

- Download the Squid proxy (<http://squid.diladele.com/>).
- Install Squid on the server.
- Configure the proxy in the client's browser. This configuration must be by IP.
- Test if you have access to the Internet.
- Type in the address bar `www.sr1.pt`. It must be an error... Who reported this error?



# Exercise

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- Register the Proxy server in DNS.
- Change the proxy settings on the client for the control to be done by the name of the server and not by IP.
- Test the client's access to the Internet.
- Configure Squid so that it only accepts calls from your local network.
- Test the client's access to the Internet.
- In the squid configuration, change the port from 3128 to 8080.
- Test the client access to the Internet by not changing the port on the client. You should not have access ...
- Replace port 3128 of the squid. Can you access the Internet?

# Exercise

- Test if you can access the FaceBook.
- Create a new rule called face that blocks access to the FaceBook. Save the squid configuration file. Start the service again and test if the rule is already working. Check that you are still able to access other sites.
- Test that you can access youtube.
- Create a new rule called external that will read to a file (bloq.txt) that is in c: \ squid \ var \ blocked. Using that file, I blocked access to youtube. Test access to that site and verify that the rule is working. Test if you can access the FaceBook. Test if you can access other sites.
- Test if you access the wetransfer and dropbox.
- Using the previous file, I blocked access to these sites. Check that you do not access these sites but that you can access others.
- Configure facebook blocking to be done by the file and not by a specific rule in the squid configuration file.

# Exercise

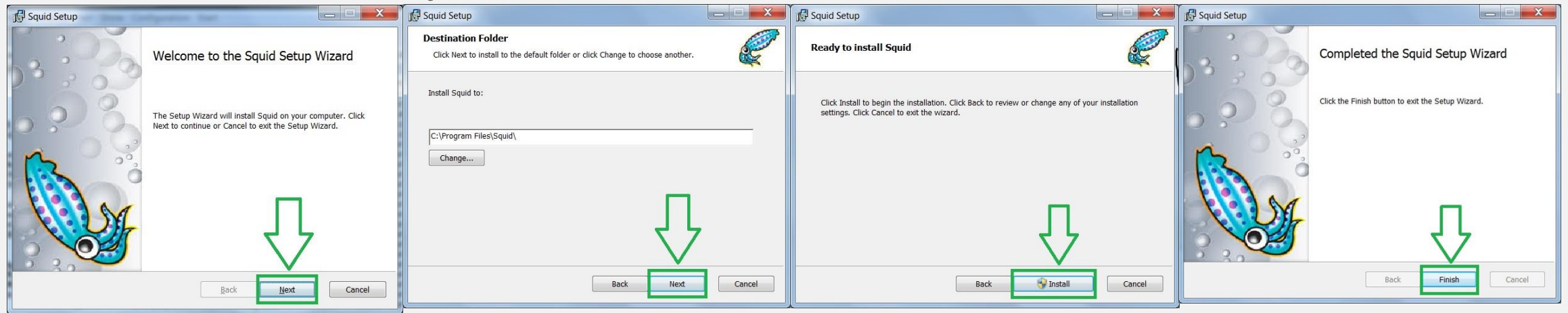
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- Test that you can access the Soccer Manager website
- Create a new rule called **words** that will read to a file (bloq1.txt) that is in c: \ squid \ var \ blocked. Using that file, I blocked access to all sites that have the word sex or soccer in their URL.
- Test client access to sites that contain those words and ensure that you can access other sites.

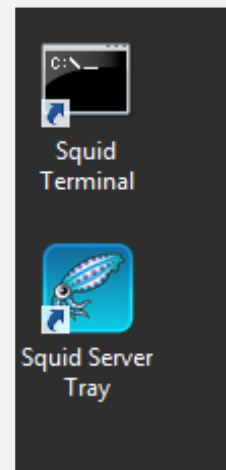


*How To*

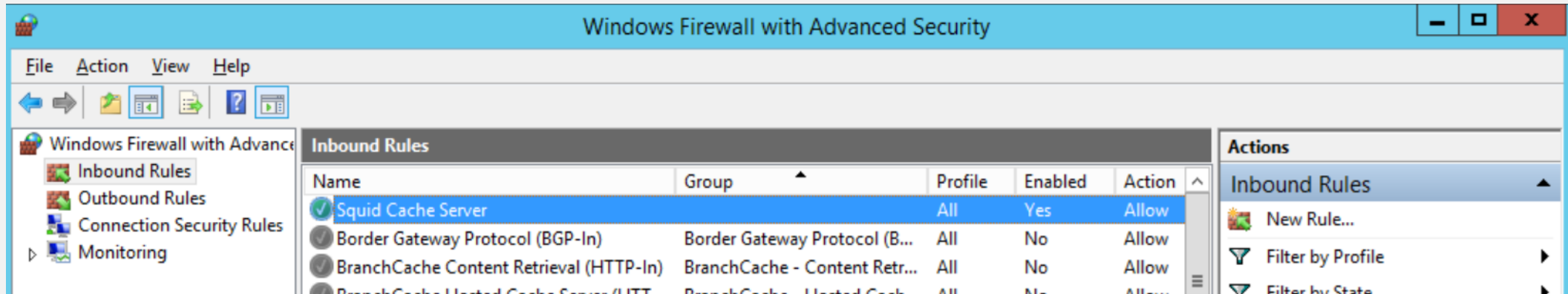
- Installation is easy.



These two icons should appear after installation



- After installing squid, port 3128 is opened and will be used by customers to connect and use this service.
- If something goes wrong in the installation you will have to create this rule manually.




### Squid Cache Server Properties

Protocols and Ports | Scope | Advanced | Local Principals | Remote Users

General | Programs and Services | Remote Computers


**General**

 **Name:**

**Description:**

☒ Enabled

**Action**

 ☒ Allow the connection

☐ Allow the connection if it is secure


☐ Block the connection

### Squid Cache Server Properties

General | Programs and Services | Remote Computers

Protocols and Ports | Scope | Advanced | Local Principals | Remote Users

**Protocols and ports**

 **Protocol type:** TCP

**Protocol number:** 6

**Local port:** Specific Ports

**Remote port:** All Ports

**Internet Control Message Protocol (ICMP) settings:**

### Squid Cache Server Properties

Protocols and Ports | Scope | Advanced | Local Principals | Remote Users

General | Programs and Services | Remote Computers

**Programs**

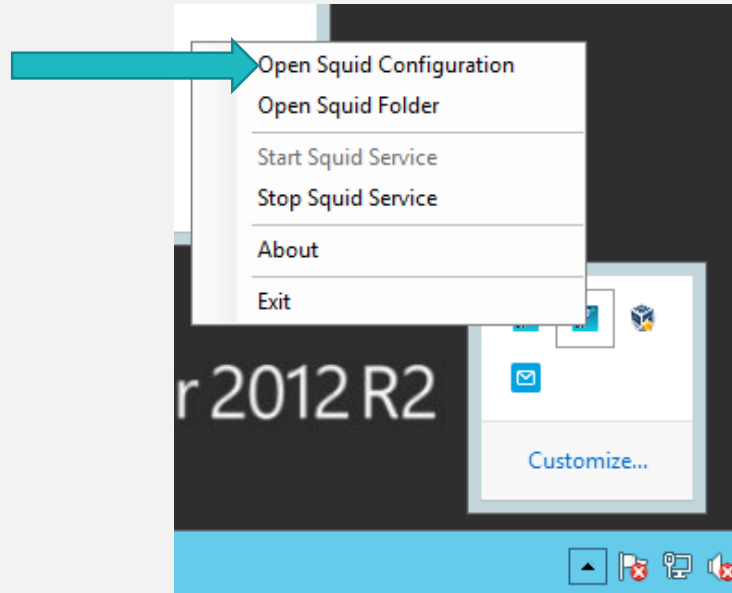
☐ All programs that meet the specified conditions

☒ This program:

**Application Packages**

**Services**

- To configure squid you can go to:

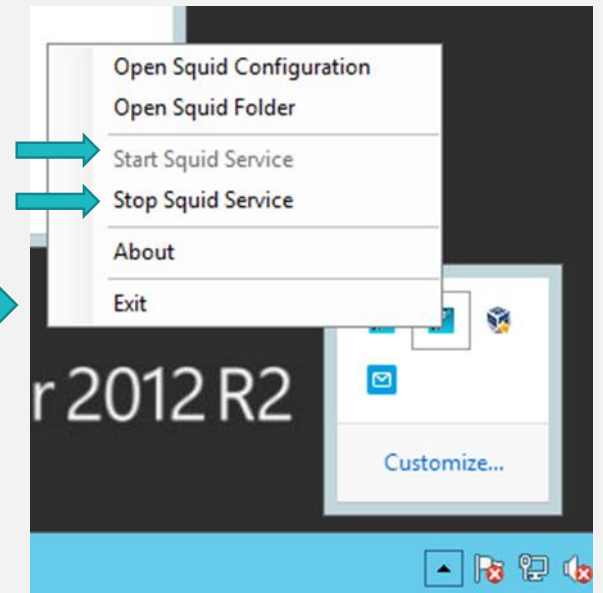


```
squid.conf - Notepad
File Edit Format View Help
#
# Recommended minimum configuration:
#
# Example rule allowing access from your local networks.
# Adapt to list your (internal) IP networks from where browsing
# should be allowed
acl localnet src 10.0.0.0/8      # RFC1918 possible internal network
acl localnet src 172.16.0.0/12  # RFC1918 possible internal network
acl localnet src 192.168.0.0/16 # RFC1918 possible internal network
acl localnet src fc00::/7       # RFC 4193 local private network range
acl localnet src fe80::/10      # RFC 4291 link-local (directly plugged) machines

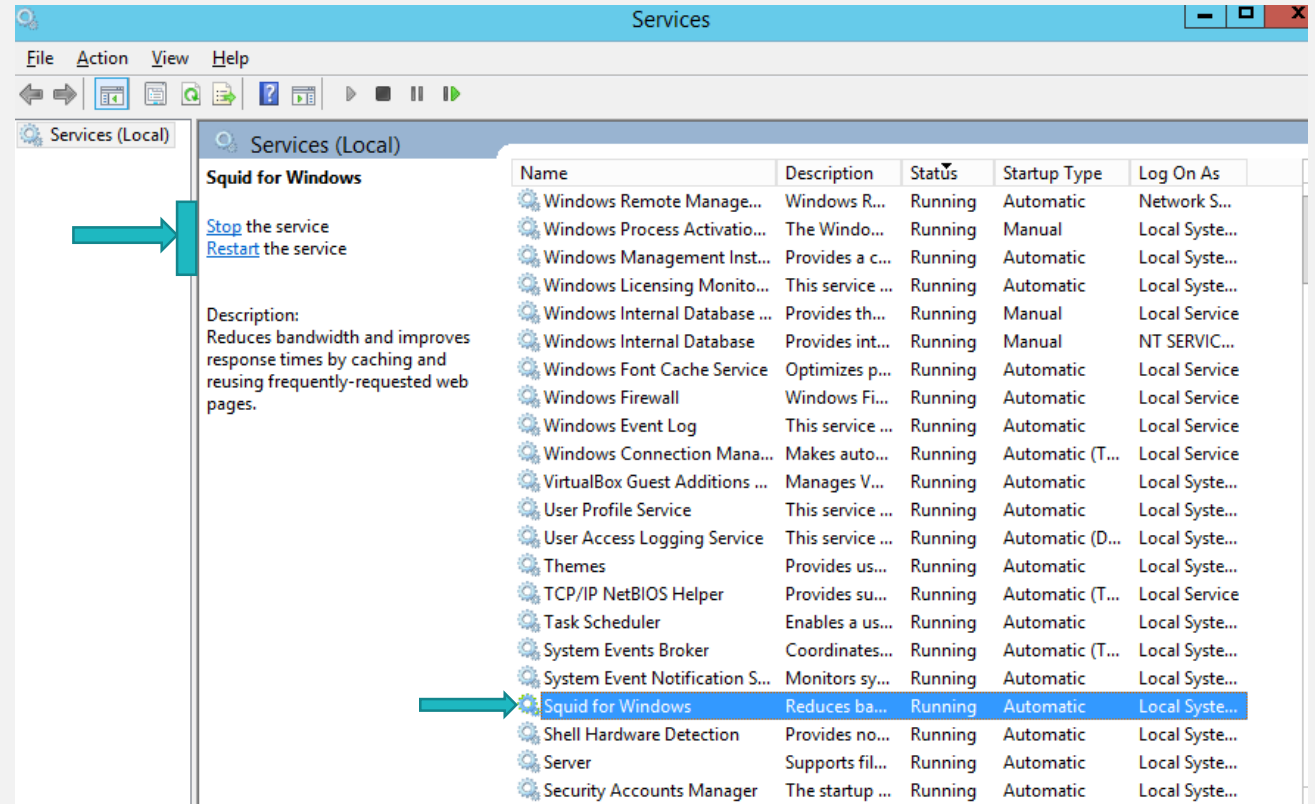
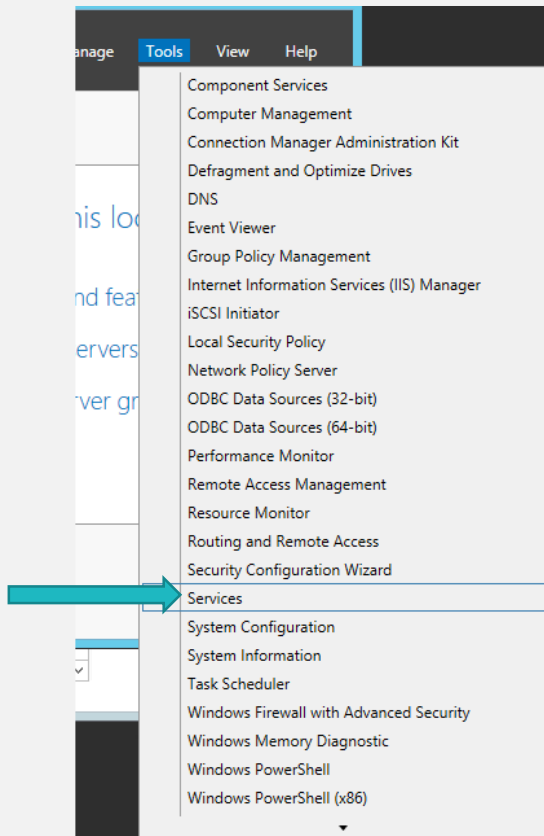
acl SSL_ports port 443
acl Safe_ports port 80          # http
acl Safe_ports port 21          # ftp
acl Safe_ports port 443         # https
acl Safe_ports port 70          # gopher
acl Safe_ports port 210         # wais
acl Safe_ports port 1025-65535  # unregistered ports
acl Safe_ports port 280         # http-mgmt
acl Safe_ports port 488         # gss-http
acl Safe_ports port 591         # filemaker
acl Safe_ports port 777         # multiling http
acl CONNECT method CONNECT

#
# Recommended minimum Access Permission configuration:
#
# Only allow cachemgr access from localhost
http_access allow localhost manager
```

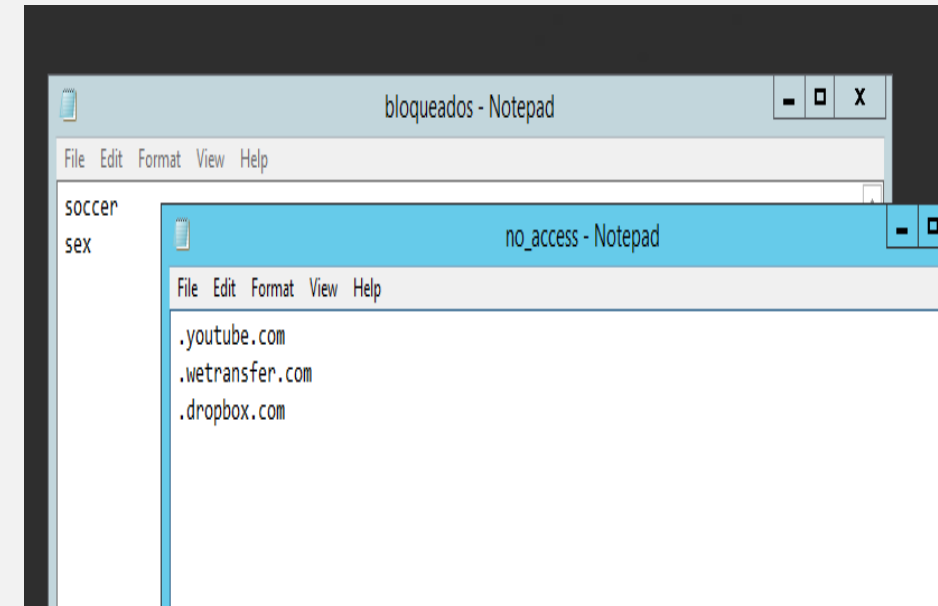
- To change the squid settings, you have to:
  1. Edit the configuration file.
  2. Save the configuration file.
  3. Stop service
  4. Start services
- When you want to post any comments you must start the line with



- You can also change the “status” of the Squid service at:

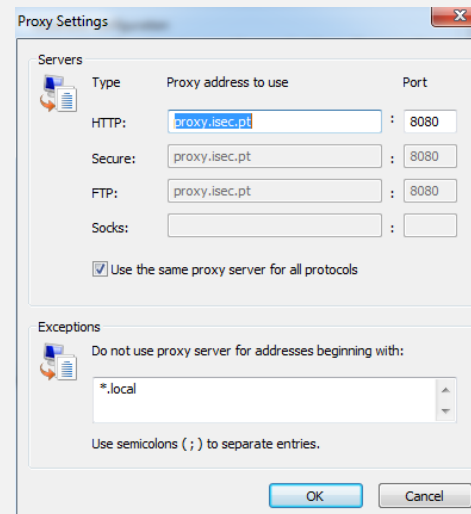
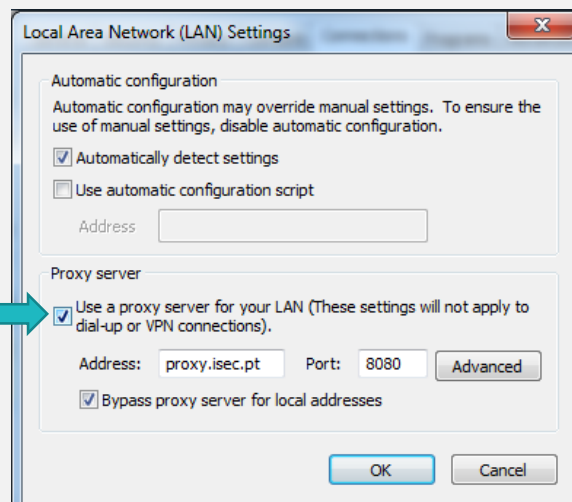
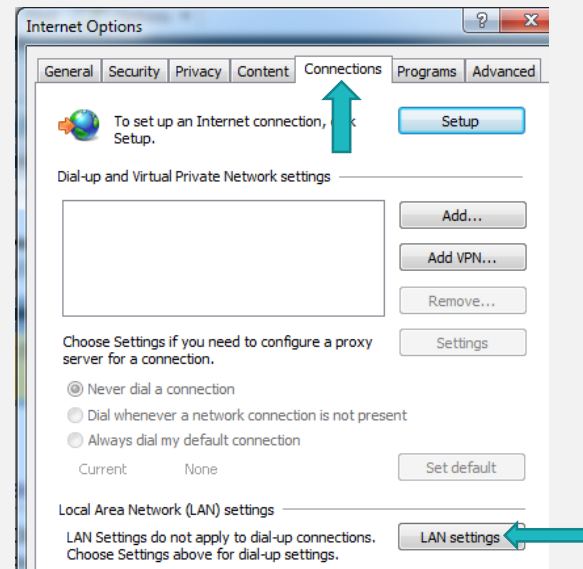
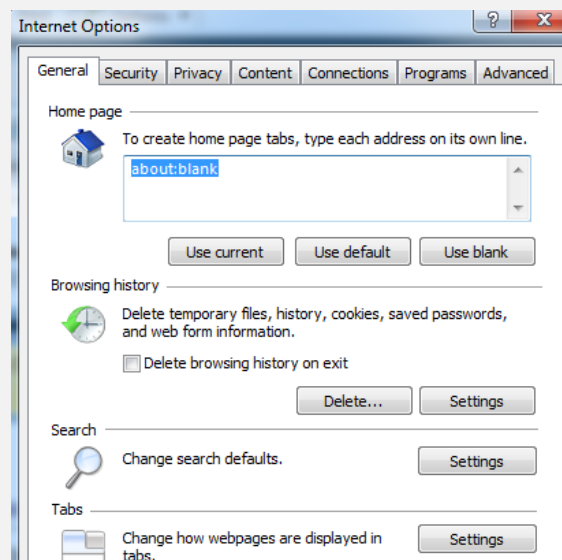


- Block Sites / Domains
  - **acl nome\_da\_acl dstdomain** "*caminho/nome do ficheiro*"
  - **http\_access deny nome\_da\_acl**
- Block words or URL
  - **acl nome\_da\_acl url\_regex -i** "*caminho/nome do ficheiro*"
  - **http\_access deny nome\_da\_acl**





# internet explorer



# chrome

The image shows the Google Chrome interface with several windows and settings panels open to demonstrate how to access local network proxy settings.

- Chrome Menu:** The 'Definições' (Settings) option is highlighted with a green arrow.
- Search Bar:** The word 'proxy' is entered in the search bar at the top of the settings page, with a green arrow pointing to it.
- System Settings:** The 'Sistema' (System) section is visible, showing options like 'Continuar a executar aplicações em segundo plano quando o Google Chrome está fechado' and 'Utilizar aceleração de hardware sempre que estiver disponível'. A green arrow points to the link 'Abrir definições do proxy do seu computador'.
- VPN Settings:** The 'Definições de Acesso Telefónico e Rede Privada virtual' (VPN and Private Network Settings) panel is open. It shows a list of VPNs with 'ACTIVAR\_DISCOS\_CCDRC - Go to vpn.ccdrc.' selected. A green arrow points to the 'Definições' (Settings) button for this VPN.
- Local Network Settings:** The 'Definições de rede local' (Local Network Settings) dialog box is open. It shows the 'Configuração automática' (Automatic configuration) section with 'Detetar definições automaticamente' checked. The 'Servidor proxy' (Proxy server) section is also visible, with the option 'Utilizar um servidor proxy para a rede local' (Use a proxy server for the local network) unchecked. A green arrow points to this checkbox.

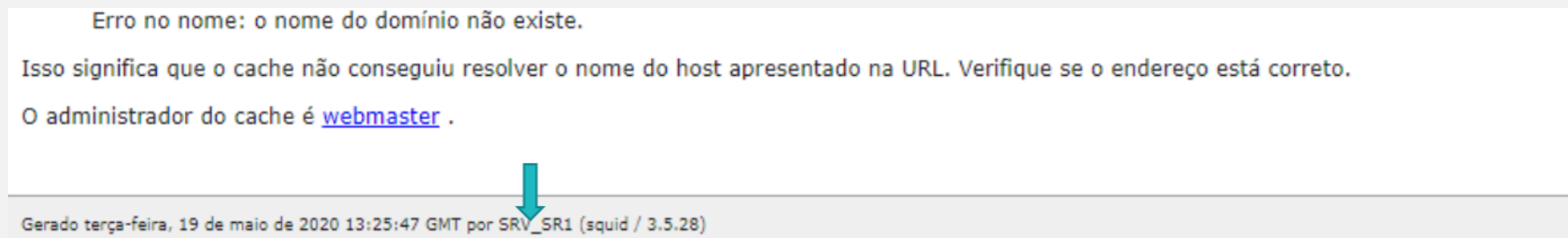
## Exercise 2 - Proxy in Windows environment - Advanced Functions

# Exercise

- Analyze the Logs file.
- Delete the logs in the file and access the Internet on the client at:
  - [www.isec.pt](http://www.isec.pt)
  - [Facebook.com](http://Facebook.com)
  - [Youtube.com](http://Youtube.com)
  - [www.cisco.com](http://www.cisco.com)
- See what happens to the log file and analyze that information.
- Place 1.1.1.1 on the squid as a secondary DNS server. Check that you continue to access the Internet.

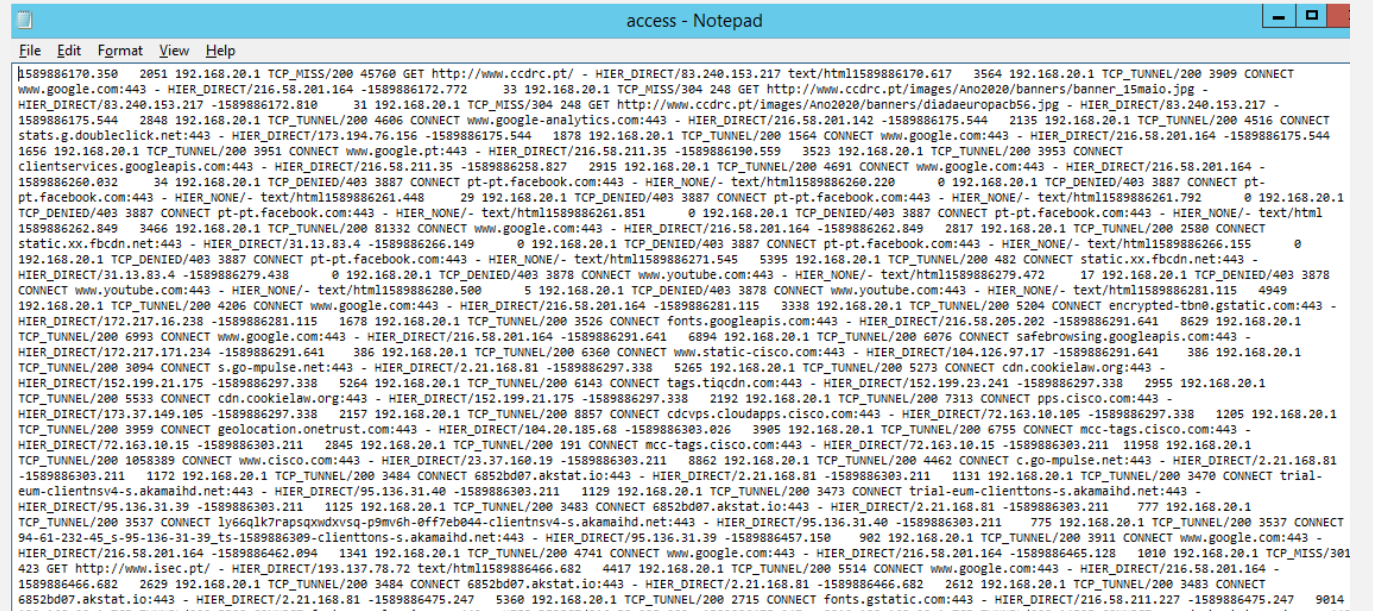
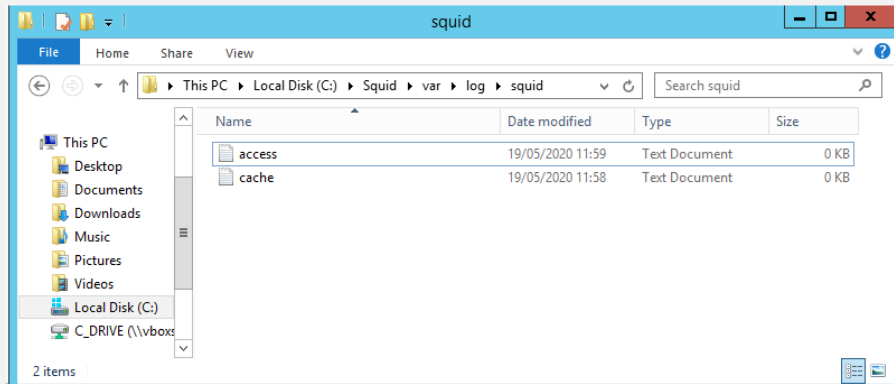
# Exercise

- Put the visible name of the Squid server as SRV\_SR1. Generate an error (for example access to `www.sr1.pt`) and see if that name appears.



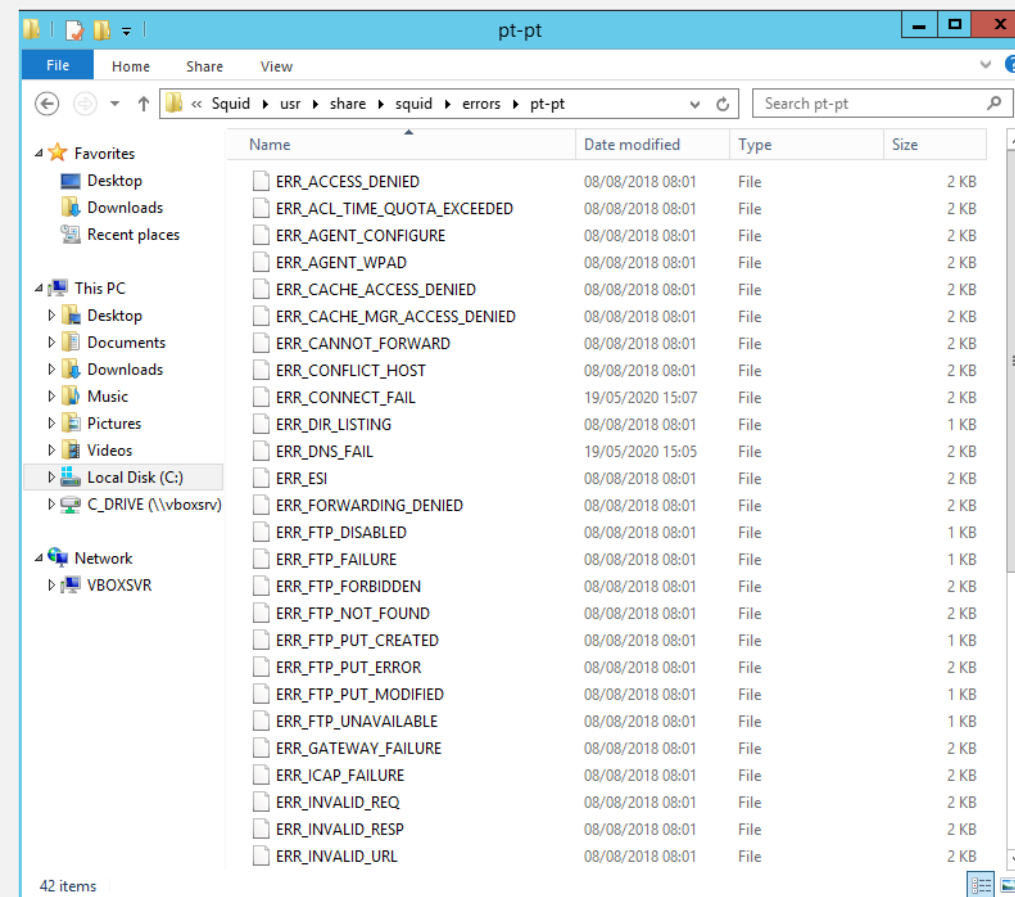
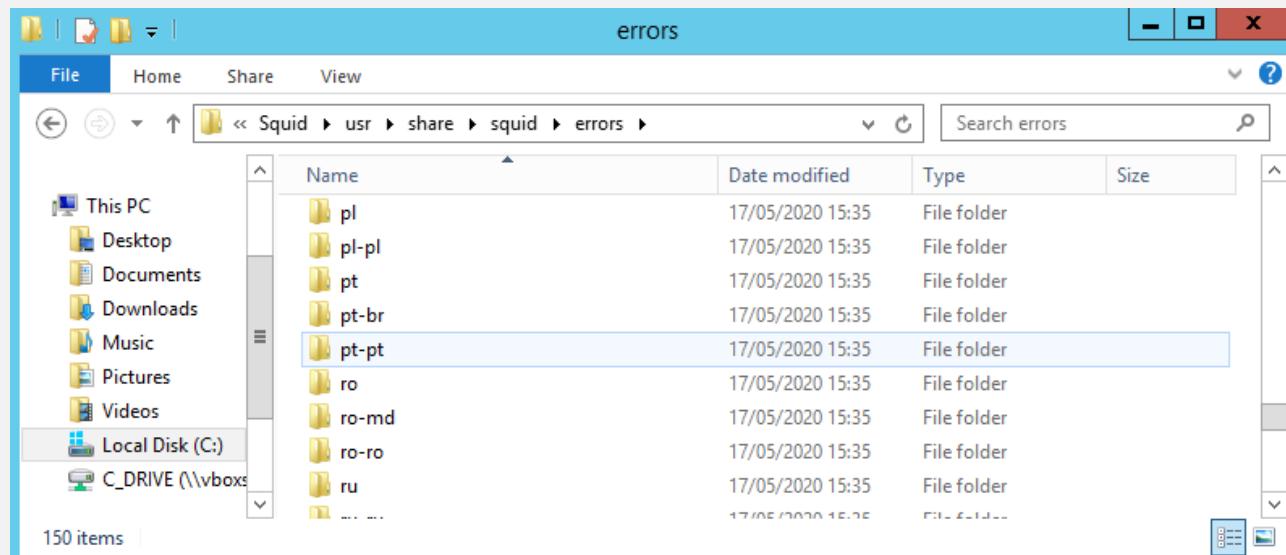
*How To*

- Squid saves the log file by default:



- You can change this location in the configuration file.
- In order to delete the contents of the file, the squid service must be stopped.

- The error pages are at:





# Questions



# Referências

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- <https://www.youtube.com/watch?v=EM17xhS9G34>
- <https://www.reaper-x.com/2006/07/18/complete-guide-on-installing-and-configuring-squid-proxy-server-for-windows/>
- <https://www.thegeekstuff.com/2010/09/squid-control-internet-access/>