LAB 6 GII 3º TDRC

TELEMATIC SERVICES ON INTERNET

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Subgroup 1

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Domain 1: palomofernandez.dtdns.net

Subgroup 2

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Domain 2: gonzalezrosas.dtdns.net

Objetives:

- Approach common and useful services in order to learn how to maintain and manage a server.
- Simulating as much as possible real work environments.
- Performing tasks that involve a combination of different skills that we acquired along 'TDRC' and other network related subjects.

Tools:







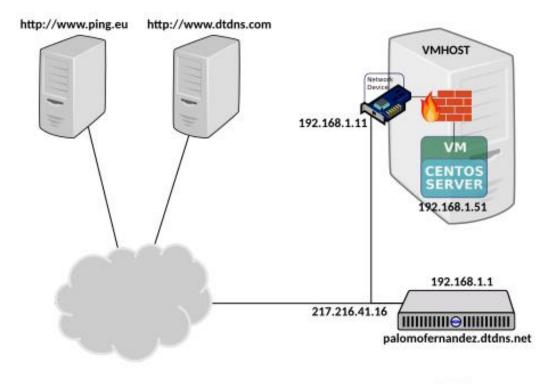
Services:





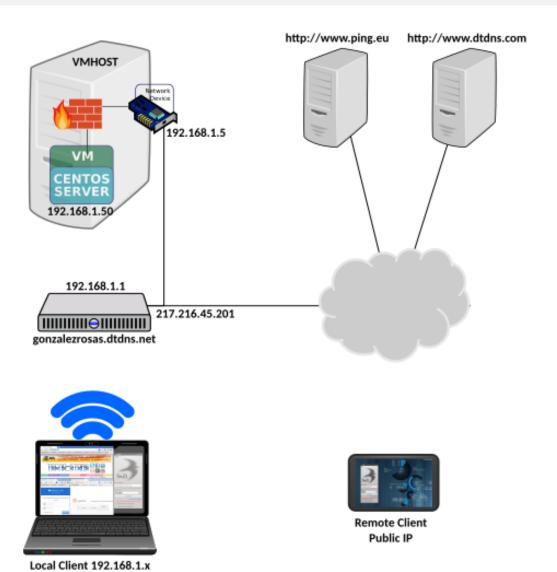




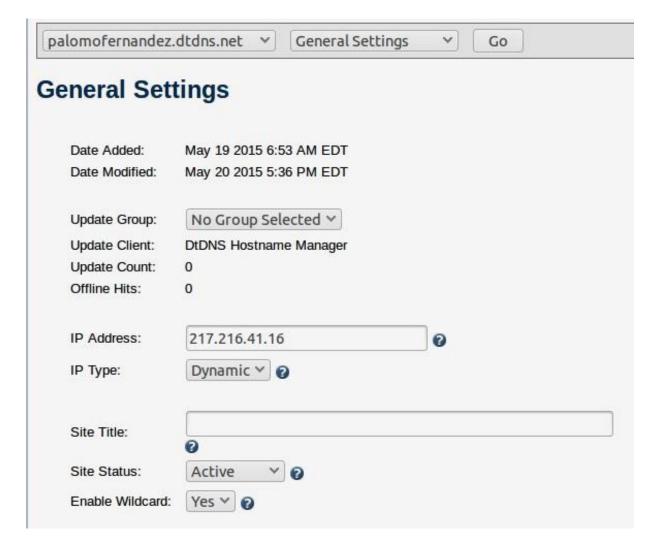




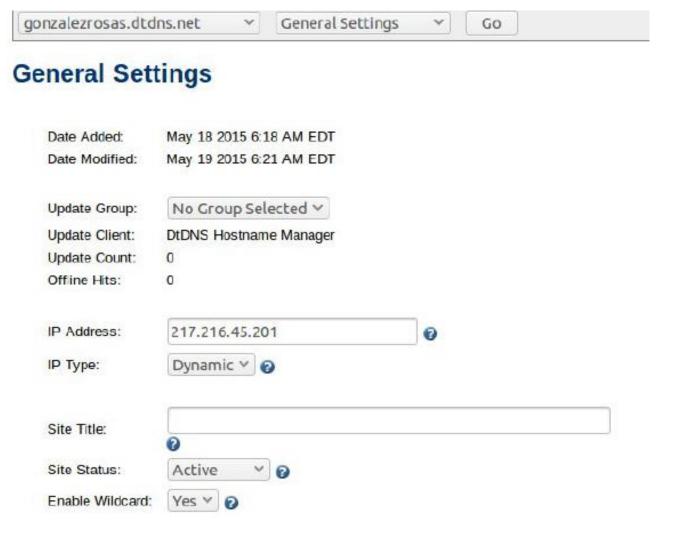




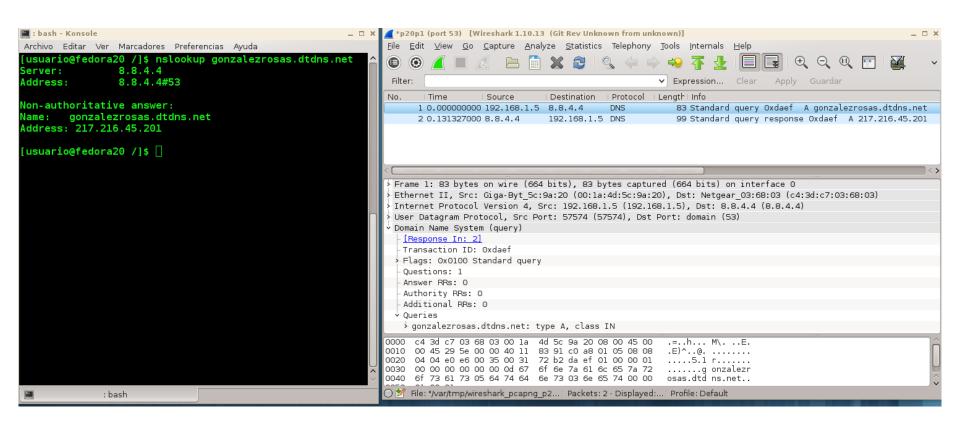
CREATE Dynamic DNS Account: palomofernandez.dtdns.net



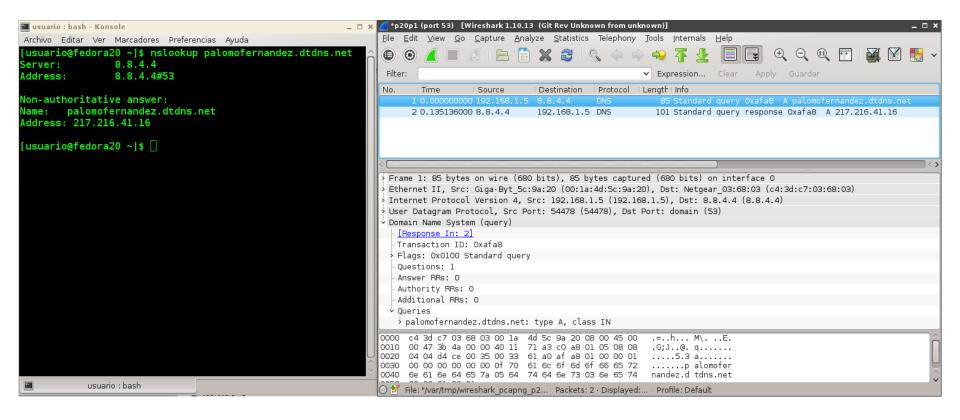
CREATE Dynamic DNS Account: gonzalezrosas.dtdns.net



CHECK domain with nslookup and wireshark



CHECK domain with nslookup and wireshark



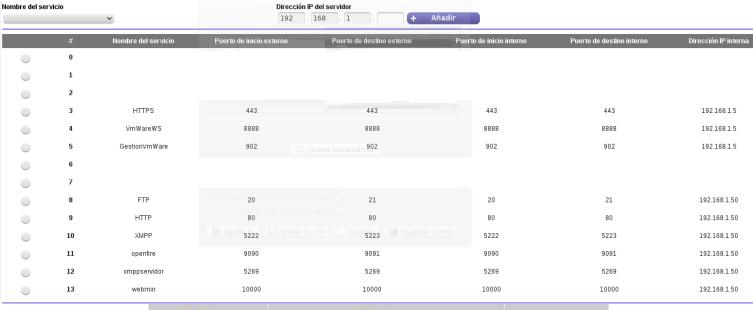
Configure DDNS at home

```
usuario@fedora20 Downloads]$ cat ddclient.conf
aemon=7200
                                          # check every 7200 seconds
syslog=yes
                                          # log update msgs to syslog
#mail=root
                                          # mail all msgs to root
mail-failure=root
                                          # mail failed update msgs to root
pid=/var/run/ddclient/ddclient.pid
                                                   # record PID in file.
ssl=yes
                                          # use ssl-support. Works with
                                          # ssl-library
## To obtain an IP address from FW status page (using fw-login, fw-password)
#use=fw, fw=192.168.1.254/status.htm, fw-skip='IP Address' # found after IP Address
## To obtain an IP address from Web status page (using the proxy if defined)
## by default, checkip.dyndns.org is used if you use the dyndns protocol.
## Using use=web is enough to get it working.
## WARNING: set deamon at least to 600 seconds if you use checkip or you could
## get banned from their service.
#use=web, web=cualesmiip.com/, web-skip='Tu IP real es ' # found after IP Address
                              ip=127.0.0.1
                                                   # via static IP's
#use=ip.
#use=if.
                              if=eth0
                                                   # via interfaces
use=web
                                                   # via web
protocol=dyndns2
                                                   # default protocol
#proxy=fasthttp.sympatico.ca:80
                                                   # default proxy
#server=members.dyndns.org
                                                   # default server
#server=members.dyndns.org:8245
                                                   # default server (bypassing proxies)
                                                   # default login
login=jesusgn90
assword=secreto1
                                                   # default password
#mx=mx.for.your.host
                                                   # default MX
#backupmx=yes|no
                                                   # host is primary MX?
                                                   # add wildcard CNAME?
#wildcard=yes|no
## DtDNS (www.dtdns.com)
protocol=dtdns.
server=www.dtdns.com,
client=ddclient,
password=secreto1
 gonzalezrosas.dtdns.net
usuario@fedora20 Downloads]$
```

```
usuario@fedora20 Downloads]$ cat ddclient.conf
laemon=7200
                                        # check every 7200 seconds
syslog=yes
                                        # log update msgs to syslog
                                        # mail all msgs to root
mail=root
ail-failure=root
                                        # mail failed update msgs to root
oid=/var/run/ddclient/ddclient.pid
                                                # record PID in file.
                                        # use ssl-support. Works with
                                        # ssl-library
## To obtain an IP address from FW status page (using fw-login, fw-password)
use=fw, fw=192.168.1.254/status.htm, fw-skip='IP Address' # found after IP Address#
## To obtain an IP address from Web status page (using the proxy if defined)
## by default, checkip.dyndns.org is used if you use the dyndns protocol.
## Using use=web is enough to get it working.
## WARNING: set deamon at least to 600 seconds if you use checkip or you could
## get banned from their service.
fuse=web, web=cualesmiip.com/, web-skip='Tu IP real es ' # found after IP Address
                             ip=127.0.0.1
                                                # via static IP's
#use=ip,
#use=if,
                             if=eth0
                                                # via interfaces
ıse=web
                                                # via web
protocol=dyndns2
                                                # default protocol
proxy=fasthttp.sympatico.ca:80
                                                # default proxy
server=members.dyndns.org
                                                # default server
#server=members.dyndns.org:8245
                                                # default server (bypassing proxies)
login=jesusgn90
                                                # default login
assword=secreto1
                                                # default password
mx=mx.for.your.host
                                                # default MX
backupmx=yes|no
                                                # host is primary MX?
#wildcard=yes|no
                                                # add wildcard CNAME?
## DtDNS (www.dtdns.com)
protocol=dtdns.
server=www.dtdns.com,
client=ddclient,
password=secreto1
palomofernandez.dtdns.net
 usuario@fedora20 Downloads|$
```

LAB 6. GII 3º TDRC. TELEMATIC SERVICES ON INTERNET. palomofernandez.dtdns.net // gonzalezrosas.dtdns.net

Open ports in ADSL router



E	xter	no	Ir	iterno				
Puerto inicial		Puerto final	Dirección IP	Puerto inicial		Puerto final	Protocolo	Activar
22	а	22	192.168.1.15	22	a	22	TCP ‡	
80	а	80	192.168.1.15	80	а	80	Ambos ‡	
8888	а	8888	192.168.1.11	8888	a	8888	Ambos ‡	
443	a	443	192.168.1.11	443	а	443	Ambos 🛊	
902	a	902	192.168.1.11	902	a	902	Ambos ‡	
-	_							-8
20	а	21	192.168.1.50	20	a	21	Ambos ‡	
80	а	80	192.168.1.50	80	a	80	Ambos ‡	
5222	а	5223	192.168.1.50	5222	a	5223	Ambos ‡	
10000	а	10000	192.168.1.50	[10000]	a	10000	Ambos 💲	
9090	a	9091	192.168.1.50	9090	а	9091	Ambos ‡	

[usuario@fedora20 ~]\$ sudo yum install httpd

Complementos cargados:

fastestmirror, keys, langpacks, protectbase, refresh-packagekit, remove-with-leaves, versionlock

Unable to send message to PackageKit

Loading mirror speeds from cached hostfile

* fedora: ftp.cica.es

* rpmfusion-free: ftp-stud.hs-esslingen.de

* rpmfusion-free-updates: ftp-stud.hs-

esslingen.de

* rpmfusion-nonfree: ftp-stud.hs-esslingen.de

* rpmfusion-nonfree-updates: ftp-stud.hs-esslingen.de

* updates: ftp.cica.es

O packages excluded due to repository protections

Paquetes instalados

httpd.x86_64

2.4.10-2.fc20

@updates

[usuario@fedora20 ~]\$ sudo yum install vsftpd

Complementos cargados:

fastestmirror, keys, langpacks, protectbase, refresh-packagekit, remove-with-leaves, versionlock

Unable to send message to PackageKit

Loading mirror speeds from cached hostfile

* fedora: ftp.cica.es

* rpmfusion-free: ftp-stud.hs-esslingen.de

* rpmfusion-free-updates: ftp-stud.hs-esslingen.de

* rpmfusion-nonfree: ftp-stud.hs-esslingen.de

* rpmfusion-nonfree-updates: ftp-stud.hs-esslingen.de

* updates: ftp.cica.es

O packages excluded due to repository protections

Paquetes disponibles

vsftpd.x86 64

3.0.2-6.fc20

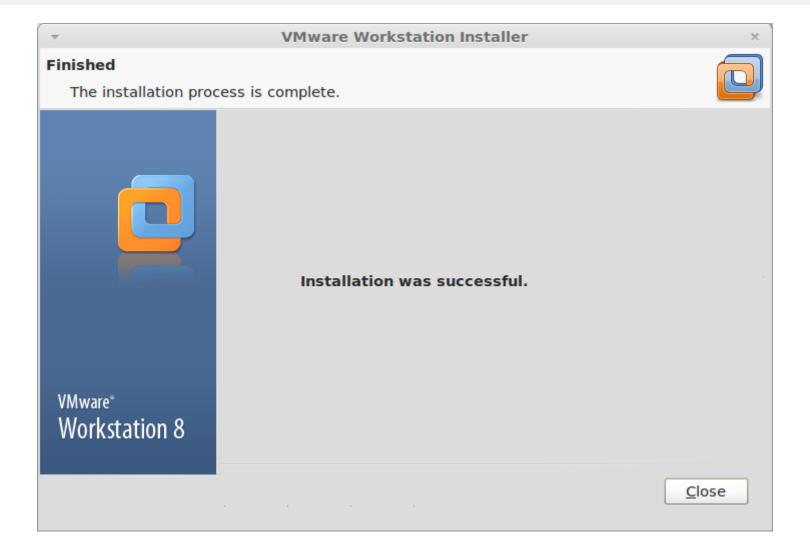
fedora

```
[usuario@fedora20 Downloads]$ wget
http://www.igniterealtime.org/downloadServlet?filename=openfire/openfire-3.10.0-
1.i386.rpm
--2015-05-28 20:38:24--
 http://www.igniterealtime.org/downloadServlet?filename=openfire/openfire-3.10.0-
1.i386.rpm
Resolviendo www.igniterealtime.org (www.igniterealtime.org)... 199.193.196.18
Conectando con www.igniterealtime.org (www.igniterealtime.org)[199.193.196.18]:80...
conectado.
Petición HTTP enviada, esperando respuesta... 302 Moved Temporarily
Localización: <a href="http://download.igniterealtime.org/openfire/openfire-3.10.0-1.i386.rpm">http://download.igniterealtime.org/openfire/openfire-3.10.0-1.i386.rpm</a>
[siguiendo]
--2015-05-28 20:38:24-- <a href="http://download.igniterealtime.org/openfire/openfire-3.10.0-">http://download.igniterealtime.org/openfire/openfire-3.10.0-</a>
1.i386.rpm
(...)
2015-05-28 20:38:37 (5,93 MB/s) - "downloadServlet?filename=openfire%2Fopenfire-
3.10.0-1.i386.rpm" guardado
```

[usuario@fedora20 Downloads]\$ mv downloadServlet\?filename\=openfire%2Fopenfire-3.10.0-1.i386.rpm openfire.rpm [usuario@fedora20 Downloads]\$ sudo yum install openfire.rpm Complementos cargados: (\ldots) Arquitectura Versión Package Repositorio Tamaño Instalando: openfire 3.10.0-1 /openfire i386 179 M Resumen de la transacción Instalar 1 Paquete Tamaño total: 179 M Tamaño instalado: 179 M Is this ok [y/d/N]: Y

Download from the <u>official website of VMWare</u> both Workstation and WSX module

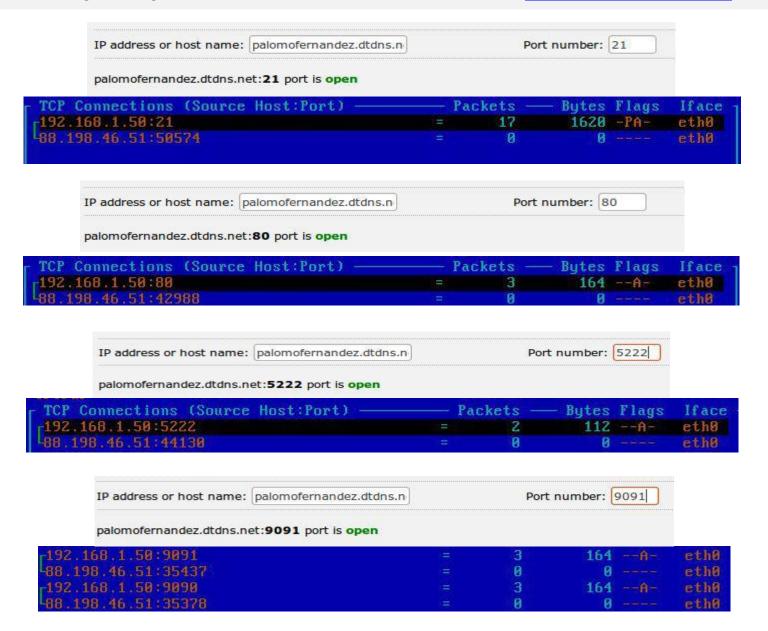
chmod +x VMware-Workstation-Full-8.0.0-2305329.x86_64.bundle ./VMware-Workstation-Full-8.0.0-2305329.x86_64.bundle



Check ports in your server with netstat -a

		f netstat -tulpn			
		connections (only servers			
Proto R		nd-Q Local Address	Foreign Address	State	PID/Program name
tcp	Θ	0 0.0.0.0:38846	0.0.0.0:*	LISTEN	973/rpc.statd
tcp	Θ	0 0.0.0.0:111	0.0.0.0:*	LISTEN	953/rpcbind
tcp	Θ	0 0.0.0.0:10000	0.0.0.0:*	LISTEN	1570/perl
tcp	Θ	0 192.168.1.50:21	0.0.0.0:*	LISTEN	1173/vsftpd
tcp	Θ	0 0.0.0.0:22	0.0.0.0:*	LISTEN	1161/sshd
tcp	Θ	0 127.0.0.1:631	0.0.0.0:*	LISTEN	1034/cupsd
tcp	0	0 127.0.0.1:5432	0.0.0.0:*	LISTEN	1204/postmaster
tcp	0	0 :::443	:::*	LISTEN	1245/httpd
tcp	Θ	0 :::7777	:::*	LISTEN	1338/java
tcp	0	0 :::9090	:::*	LISTEN	1338/java
tcp	0	0 :::9091	:::*	LISTEN	1338/java
tcp	Θ	0 :::5222	:::*	LISTEN	1338/java
tcp	0	0 :::39878	:::*	LISTEN	973/rpc.statd
tcp	0	0 :::5223	:::*	LISTEN	1338/java
tcp	0	0 :::5229	:::*	LISTEN	1338/java
tcp	0	0 :::111	:::*	LISTEN	953/rpcbind
tcp	0	0 :::80	:::*	LISTEN	1245/httpd
tcp	Θ	0 :::5269	:::*	LISTEN	1338/java
tcp	0	0 :::22	:::*	LISTEN	1161/sshd
tcp	0	0 ::1:631	:::*	LISTEN	1034/cupsd
tcp	Θ	0 ::1:5432	:::*	LISTEN	1204/postmaster
udp	0	0 0.0.0.0:636	0.0.0.0:*		900/portreserve
udp	Θ	0 0.0.0.0:34179	0.0.0.0:*		973/rpc.statd
udp	Θ	0 0.0.0.0:10000	0.0.0.0:*		1570/perl
udp	0	0 0.0.0.0:704	0.0.0.0:*		953/rpcbind
udp	Θ	0 127.0.0.1:725	0.0.0.0:*		973/rpc.statd
udp	0	0 0.0.0.0:111	0.0.0.0:*		953/rpcbind
udp	Θ	0 0.0.0.0:631	0.0.0.0:*		1034/cupsd
udp	0	0 :::704	:::*		953/rpcbind
udp	0	0 :::57673	:::*		973/rpc.statd
udp	0	_0 :::111	:::*		953/rpcbind
[root@s	server /]#	≠ ■			

Check all open ports from outside with www.ping.eu

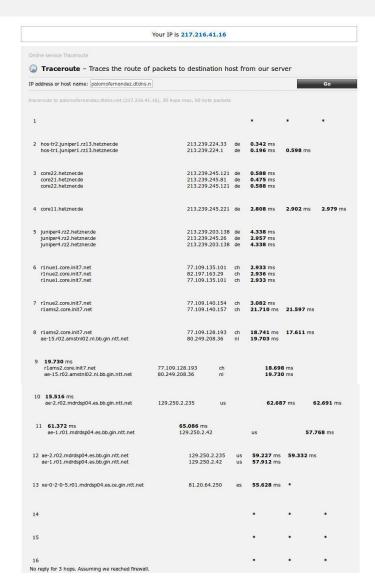


Check ports from outside with www.ping.eu



Checking conectivity to server with traceroute from OUTSIDE

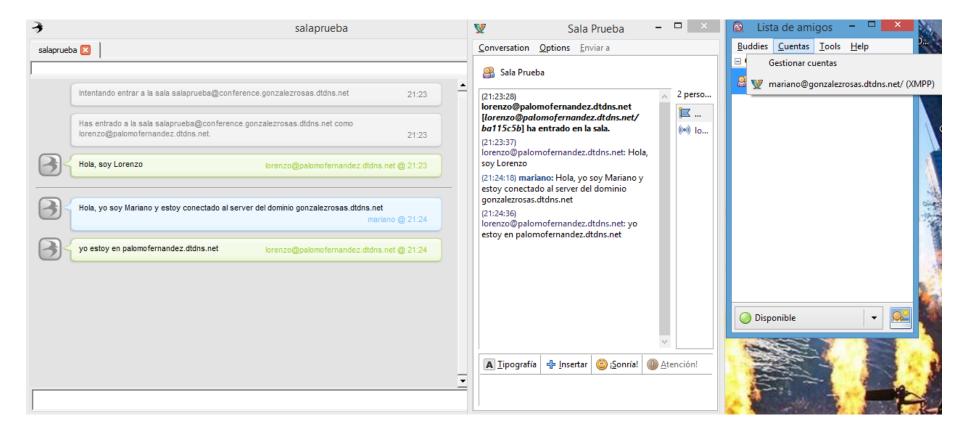
IP address or host name: [gonzalezrosas.dtdns.net]					Go
traceroute to gonzalezrosas.dtdns.net (217.216.45.201), 30	hops max, 60 byte packets				
1			*	*	*
2 hos-tr3.juniper2.rz13.hetzner.de hos-tr4.juniper2.rz13.hetzner.de hos-tr2.juniper1.rz13.hetzner.de	213.239.224.65 213.239.224.97 213.239.224.33	de	0.166 ms 0.157 ms 0.120 ms		
3 core22.hetzner.de core21.hetzner.de	213.239.245.12 213.239.245.81		0.193 ms 0.194 ms	0.201 ms	
4 corel1.hetzner.de corel1.hetzner.de	213.239.245.22 213.239.245.22		2.746 ms 2.811 ms	2.805 ms	
5 juniper4.rz2.hetzner.de juniper4.rz2.hetzner.de juniper4.rz2.hetzner.de	213.239.203.13 213.239.245.26 213.239.203.13	de	2.795 ms 2.807 ms 2.795 ms		
6 r1nuel.core.init7.net r1nue2.core.init7.net	77.109.135.101 82.197.163.29	ch ch	2.936 ms 2.910 ms	2.934 ms	
7 rlnue2.core.init7.net rlnuc1.core.init7.net rlnue2.core.init7.net	77.109.140.154 77.109.128.231 77.109.140.154	ch	2.926 ms 5.431 ms 2.926 ms		
8 rlams2.core.init7.net rlmucl.core.init7.net rlams2.core.init7.net	77.109.140.157 77.109.128.231 77.109.128.193	ch	21.604 ms 5.410 ms 18.475 ms		
9 ae-15.r02.amstnl02.nl.bb.gin.ntt.net	80.249.208.36	nl	19.136 ms	14.744 ms	21.363 ms
11 ae-2.r02.mdrdsp04.es.bb.gin.ntt.net	129.250.2.235	us	58.722 ms	57.688 ms	58.717 ms
12 ae-1.r01.mdrdsp04.es.bb.gm.ntt.net ae-2.r02.mdrdsp04.es.bb.gm.ntt.net ae-1.r01.mdrdsp04.es.bb.gm.ntt.net	129.250.2.42 129.250.2.235 129.250.2.42	us us us	57.329 ms 53.971 ms 57.329 ms		
13 53.232 ms xe-0-2-0-5.r01.mdrdsp04.es.ce.gin.ntt.net xe-0-2-0-6.r01.mdrdsp04.es.ce.gin.ntt.net		es es		39 ms 12 ms	
14			*	*	*
15			*	*	*
16 No reply for 3 hops. Assuming we reached firewall.			*	*	*



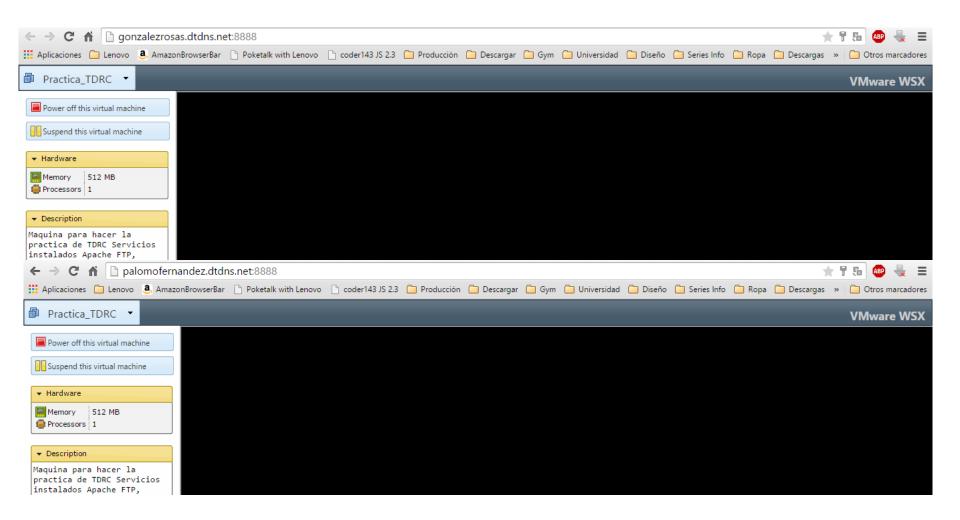
Show service 1



Show service 2



Show service 3



CONCLUSIONS

- Some steps turned out to be a little more complex than expected (configuring VM's and hosts to share resources on the web interface WSX) → permission and user's configuration issues
- Several concepts learnt during the year unified: NAT, network management, DDNS.
- Get in touch with a few useful tools, such as Webmin for server administration, Openfire for the XMPP servers or PhpPgAdmin to manage the database.

CONCLUSIONS

- Hosting our own messaging server, secured with SSL technology.
- Keep sensible data out of reach of other third parties that may be involved in the communication and eavesdrop information.