

Redes de Computadoras: Capa de Aplicación II

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¿Cómo se definen los estándares?

- Request for Comment (RFC)
- <https://www.rfc-editor.org/rfc-index.txt>
- Último RFC agregado. 9901 Selective Disclosure for JSON Web Tokens. Nov 2025.

Algunos RFC

- ARP RFC 826 "An Ethernet Address Resolution Protocol"
- DHCP RFC 2131 "Dynamic Host Configuration Protocol"
- ICMP RFC 792 "INTERNET CONTROL MESSAGE PROTOCOL"
- IPv4 RFC 791 "INTERNET PROTOCOL"
- UDP RFC 768 "User Datagram Protocol"

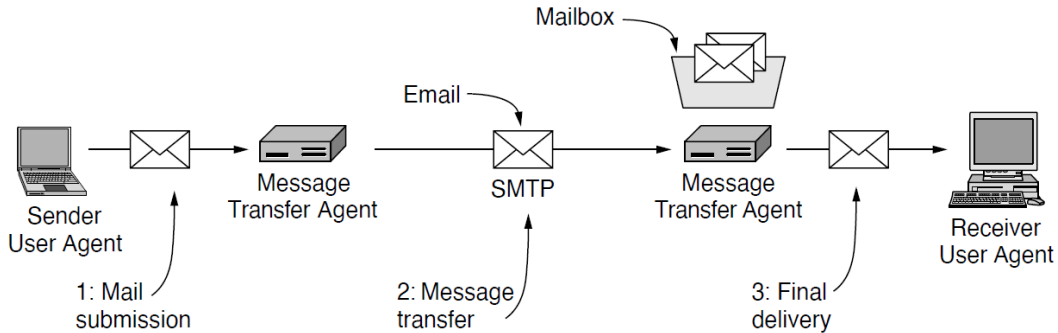
Algunos RFC. Cont

- TCP RFC 793 "TRANSMISSION CONTROL PROTOCOL"
- FTP RFC 959 "FILE TRANSFER PROTOCOL (FTP)"
- HTTP RFC 2068 "Hypertext Transfer Protocol – HTTP/1.1"
- SMTP RFC 821,822 "SIMPLE MAIL TRANSFER PROTOCOL"
- DNS RFC 1034,1035 "DOMAIN NAMES"

Protocolo SMTP

- Transferencia de correo electrónico
- Puerto 25
- Protocolo TCP

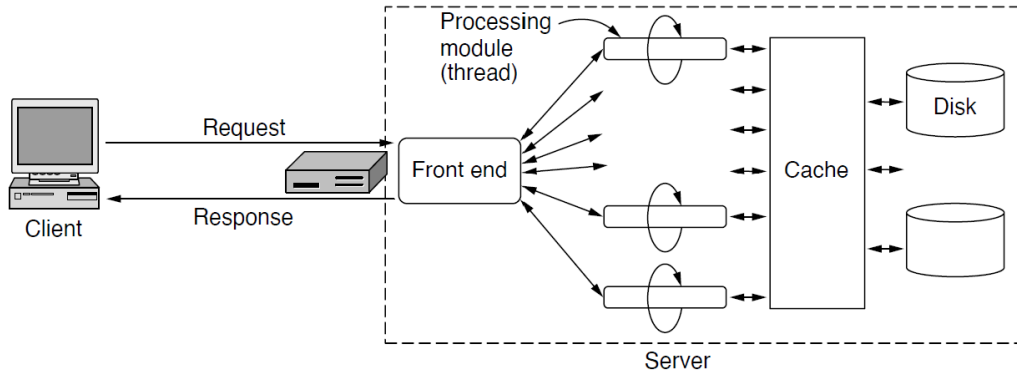
Estructura SMTP



Protocolo HTTP

- Transferencia de hipermedia
- Puertos 80, 443
- Protocolo TCP

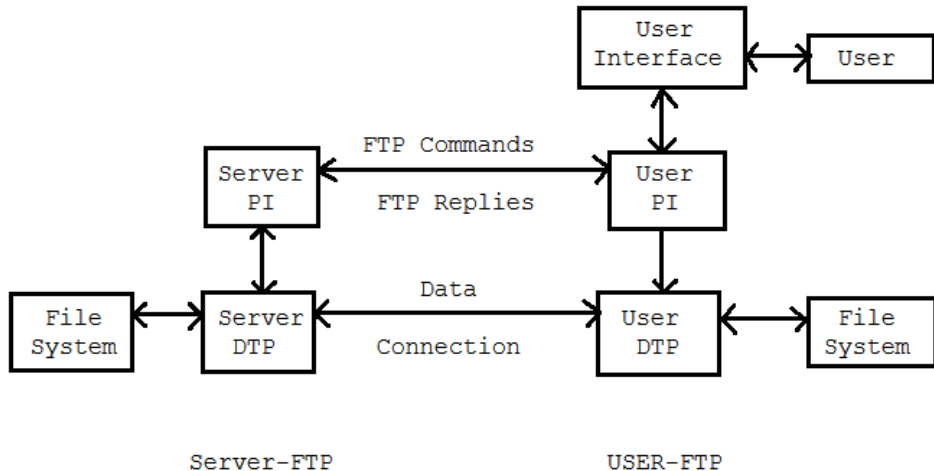
Comunicación HTTP



Protocolo FTP

- Transferencia de archivos
- Puertos 20, 21
- Protocolo TCP

Comunicacion FTP



Protocolo IRC

- Mensajería basada en texto
- Puerto 6667
- Protocolo TCP

Ejemplo ui IRC

The screenshot shows the Vulphure IRC client interface. The title bar reads "Vulphure @ Libera.Chat / #archlinux - HexChat". The menu bar includes "HexChat", "View", "Server", "Settings", "Window", and "Help". The main chat window displays a conversation in the #archlinux channel. The chat history shows messages from Namarrgon, sanchex, and various users joining and quitting. A link to a bug report is visible at the top of the chat area. On the right side, there is a list of users in the channel, including EMIYA, 020AAD8D, _0ne, _dp, _mikey, _schrott, _var, _\, A_Dragon, Aardwolf, aaro, Abdullah, Abrax, abyss, acetech, achillea, adnidor, adomas, Adran, Aelius, aeris, af, agnem, aibo, and AiO.

Libera.Chat | a.org/show_bug.cgi?id=1749908 | Help out testing the AUR <https://lists.archlinux.org/pipermail/aur-general/2021-September/036567.html> | 1 ops, 1398 total

#archlinux

#wikipedia

[11:11:13] Namarrgon again.
[11:12:14] sanchex sanchex: are you running iwd and nm at the same time?
[11:12:35] Namarrgon I am running nm, I don't know if iwd is also running
[11:13:07] sanchex did you configure nm to use iwd as the backend instead of wpa_supplicant?
[11:13:07] sanchex No
[11:13:11] Namarrgon then why is iwd running?
[11:13:36] * julia (~quassel@user/julia) has joined
[11:15:58] * DeepDayze has quit (Quit: Leaving)
[11:17:02] sanchex good question
[11:17:45] Namarrgon how did you install arch?
[11:18:08] Namarrgon you're the third one with this issue today
[11:18:23] * gehidore is curious too
[11:18:54] * cabo40 (~cabo40@189.217.81.59) has joined
[11:19:36] sanchex Using the Arch installer, this was months ago tho
[11:19:46] Namarrgon 'archinstall'?
[11:19:52] sanchex Right, the official one.
[11:20:06] sanchex I do not have a config file for NetworkManager instructing it to use iwd as the backend.
[11:20:14] Namarrgon disable iwd and reboot
[11:20:15] sanchex as described here: <https://wiki.archlinux.org/title/NetworkManager#Configuration>
[11:20:16] phrik Title: NetworkManager - ArchWiki (at wiki.archlinux.org)
[11:20:29] sanchex ok
[11:20:51] * sanchex has quit (Remote host closed the connection)
[11:21:17] * masoudd_ suspiciously does a systemctl status iwd
[11:21:36] * igemnace (~ian@user/igemnace) has joined
[11:24:01] * masoudd_ is now known as masoudd
[11:25:31] * beta_ has quit (Remote host closed the connection)
[11:26:06] * soapsudsxx has quit (Remote host closed the connection)
[11:27:04] * ChromaCat248 has quit (Remote host closed the connection)
[11:27:22] * beta (~beta@75.164.26.95) has joined
[11:27:35] * beta is now known as beta_
[11:28:37] jayache80 Namarrgon: Thanks. Using asp, I got the wpa_supplicant package, modified wpa_supplicant_config to have CONFIG_MESH=n and built/installed the package but no joy there
[11:29:07] * indux (~Thunderbi@95.168.153.128) has joined
[11:29:16] * Nix\ has quit (Quit: Leaving)
[11:30:08] * sanchex (~sanchex@45.189.60.4) has joined
[11:30:22] sanchex Namarrgon, that fixed it, thanks.
[11:31:57] * Nix\ (~Nix\@user/Nix/x-0321943) has joined
[11:32:36] * soapsudsxx (~soapsudsx@209.221.40.152) has joined
[11:33:20] * beta_ has quit (Remote host closed the connection)

EMIYA
020AAD8D
_0ne
_dp
_mikey
_schrott
_var
_\
A_Dragon
Aardwolf
aaro
Abdullah
Abrax
abyss
acetech
achillea
adnidor
adomas
Adran
Aelius
aeris
af
agnem
aibo
AiO

Protocolo SSH

- Ejecución de una consola remota
- Puerto 22
- Protocolo TCP

Ejemplo SSH

```
192.168.1.1 - PuTTY
login as: root
root@192.168.1.1's password:

BusyBox v1.4.2 (2007-08-27 09:18:59 CDT) Built-in shell (ash)
Enter 'help' for a list of built-in commands.


|_| _ | _ _ _ _ _ | _ _ _ _ _ | _ _ _ _ _ |
|_| _ | _ _ _ _ _ | _ _ _ _ _ | _ _ _ _ _ |
|_| W I R E L E S S   F R E E D O M
WHITE RUSSIAN (0.9) -----
* 2 oz Vodka    Mix the Vodka and Kahlua together
* 1 oz Kahlua   over ice, then float the cream or
* 1/2oz cream   milk on the top.
-----
root@00c1260b04c8:~$ █
```

Protocolo NTP

- Sincronizacion de hora
- Puerto 123
- Protocolo UDP

Ejemplo NTP

```
Checking current status of NTP service with ntpq -p
  remote          refid          st t when poll reach    delay    offset    jitter
=====
-ntp.nmi.nl       .PPS.             1 u   47   64   377   12.065    0.206    0.165
+ntp0.nl.uu.net   .PPS.             1 u   19   64   377   10.083    0.105    0.462
-ntp1.nl.uu.net   .PPS.             1 u    3   64   377   10.114    0.141    8.548
-chime2.surfnet.  .GPS.             1 u   54   64   377   11.905   -0.293    0.319
+chime5.surfnet.  .PPS.             1 u   40   64   377   12.508   -0.115    0.298
*metronoom.dmz.c  .PPS.             1 u   54   64   377   11.281   -0.037    0.174
+ntp4.bit.nl      .PPS.             1 u   48   64   377    9.915   -0.020    0.139
-ntp1.oma.be      .MRS.             1 u   34   64   377   13.661    0.220    0.281
+ntp2.oma.be      .PPS.             1 u   31   64   377   14.064   -0.006    0.226
#ntp-p1.obspm.fr  .TS-4.            1 u   19   64   377   21.457   -1.277    0.434
#metasntp11.admi  .PPS.             1 u    6   64   377   27.033    0.959    0.649
-ptbtime1.ptb.de  .PTB.             1 u   45   64   377   28.312   -0.250    0.225
#139.143.5.30     139.143.45.11     2 u   59   64   377   17.301    0.339    1.936
#91.148.192.49 < 193.67.79.202     2 u   40   64   377    8.725    0.154    0.374
#antongleuf.giga  193.67.79.202     2 u   58   64   377    9.019    0.302    0.220
#intimideer.lafa  5.200.6.34        3 u   28   64   377   10.155   -0.490    0.415
<Auto-Refresh every 10s --- CTRL+C to Cancel>
```