# Cliente de BitTorrent

Grupo Crab Rave - 1er Cuatrimestre 2022

- Semorile, Gabriel
- Rizzo Ehrenbock, Gonzalo
- Nicolini, Franco
- Torres Dalmas, Nicolás

## Agenda

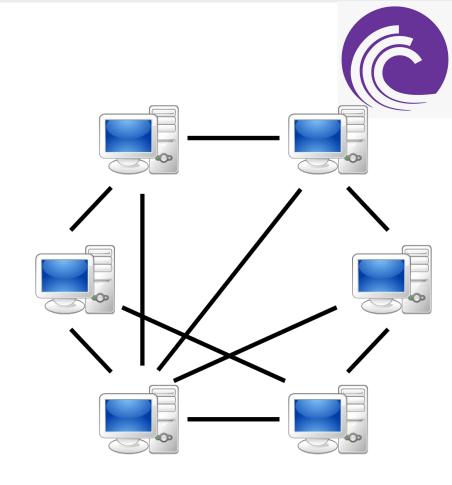
- Introducción
- Arquitectura
- Procesamiento de .torrent
- Comunicación con el Tracker
- Comunicación con un Peer
- Multithreading
- Descarga de una pieza
- Modo Servidor
- Logger
- UI
- Q&A

#### Introducción

BitTorrent es un protocolo para descargar y distribuir archivos a través de Internet.

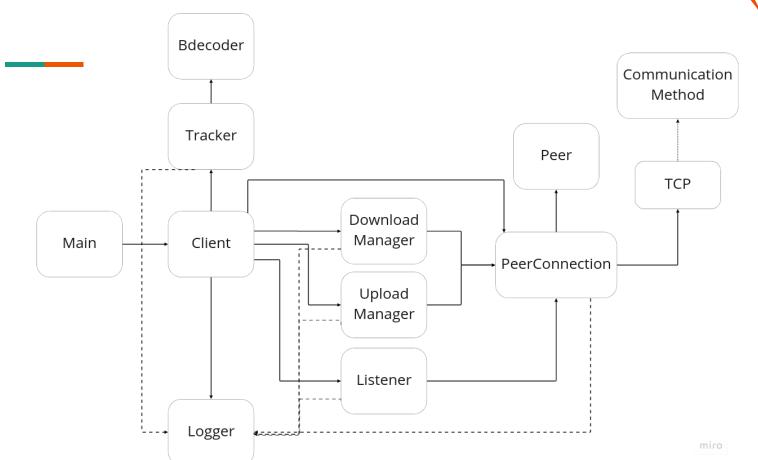
A diferencia de la relación cliente/servidor tradicional, en la que los descargadores se conectan a un servidor central,

los participantes en la red BitTorrent, llamados peer, descargan fragmentos de archivos entre sí. Es por esto que su protocolo se llama peer to peer.



## **Arquitectura**



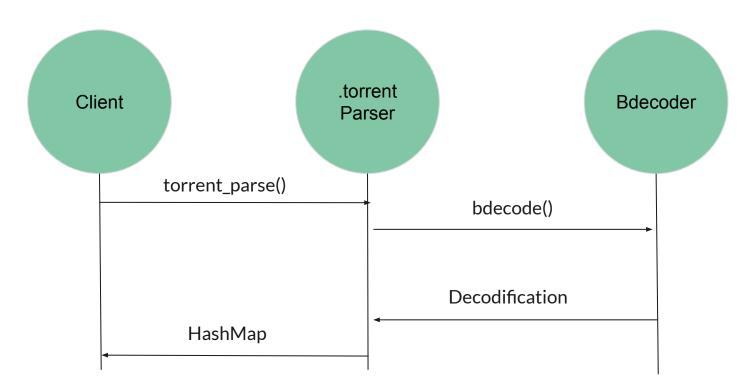




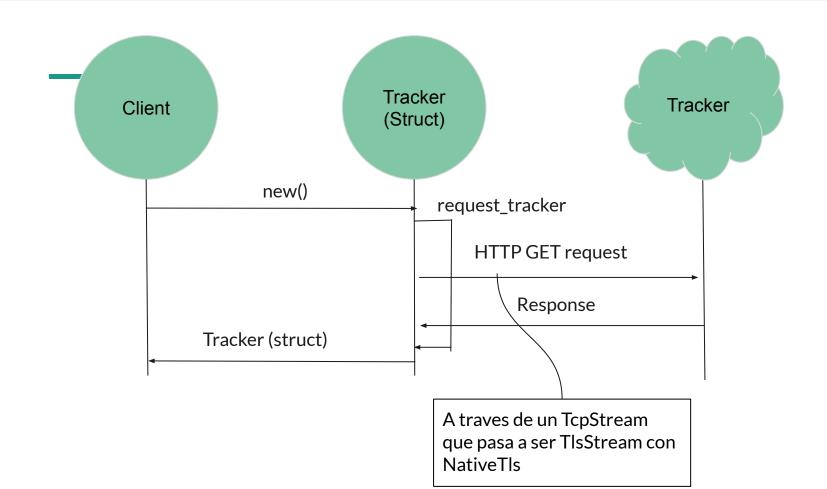
## El archivo .torrent, su procesamiento y lectura

Para comenzar a descargar necesitamos un archivo .torrent, para poder obtener la información del tracker (Url Announce) y conectar con el.

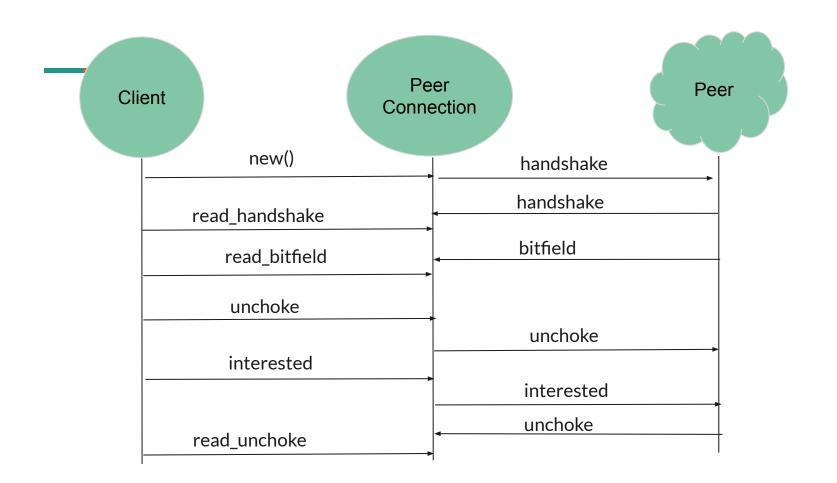




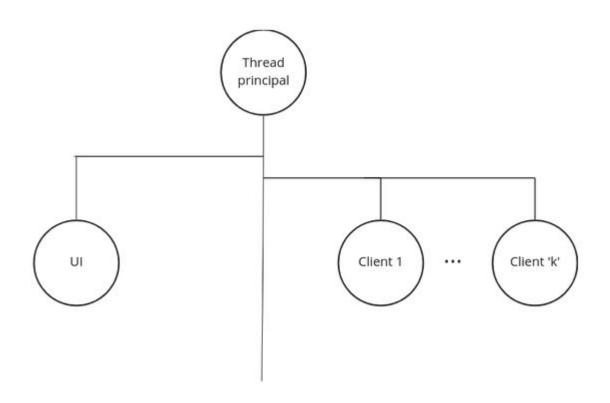
## Comunicación con el Tracker



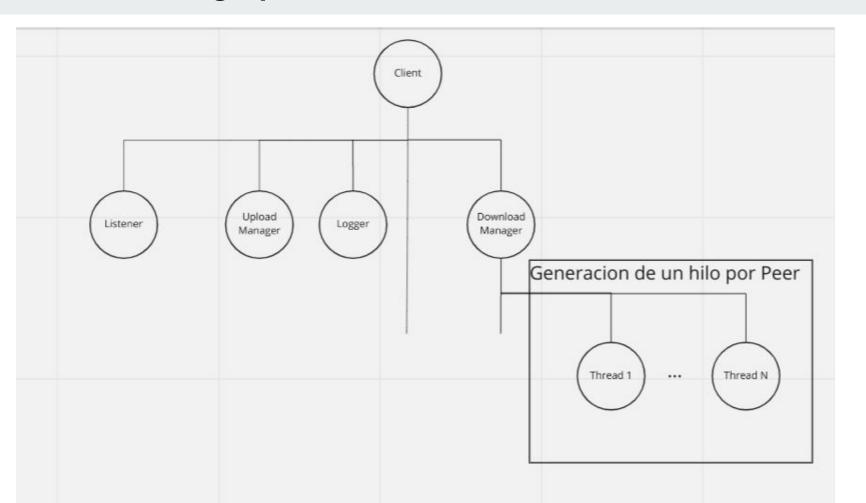
#### Comunicación con un Peer



## **Multithreading - Principal**

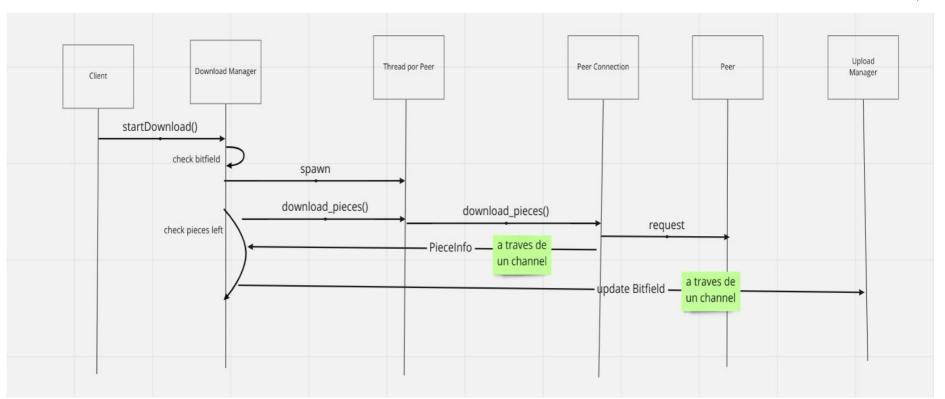


## **Multithreading - por Client**



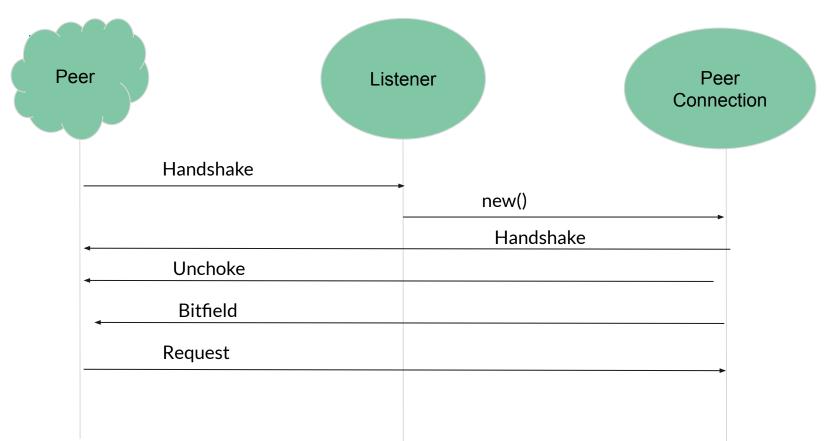
#### **Download Piece**





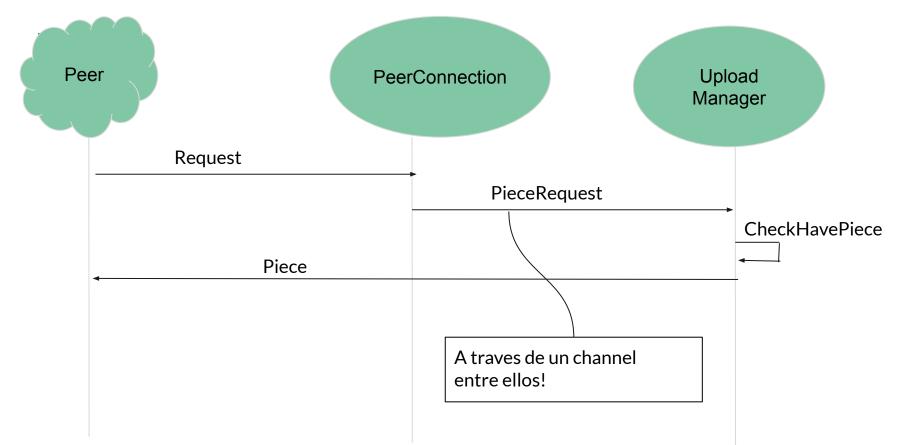
#### **Modo Servidor: El Listener**



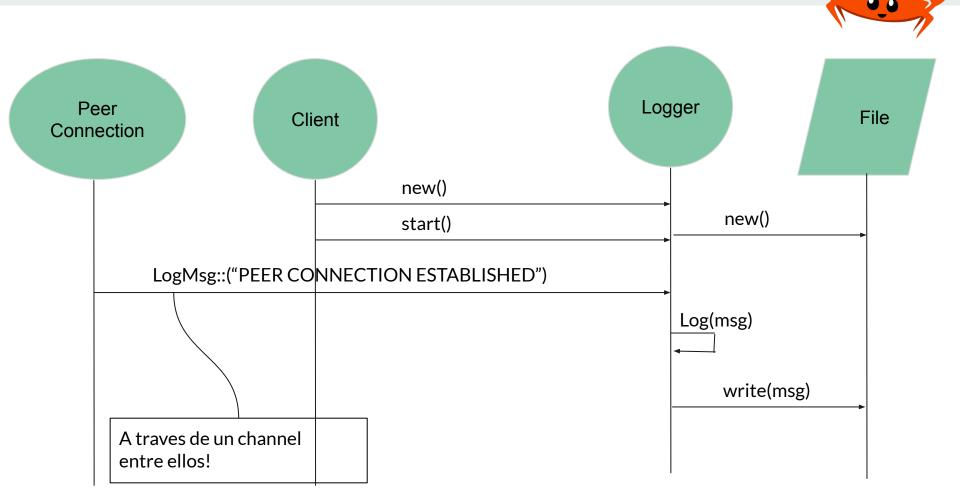


## Modo Servidor: El UploadManager

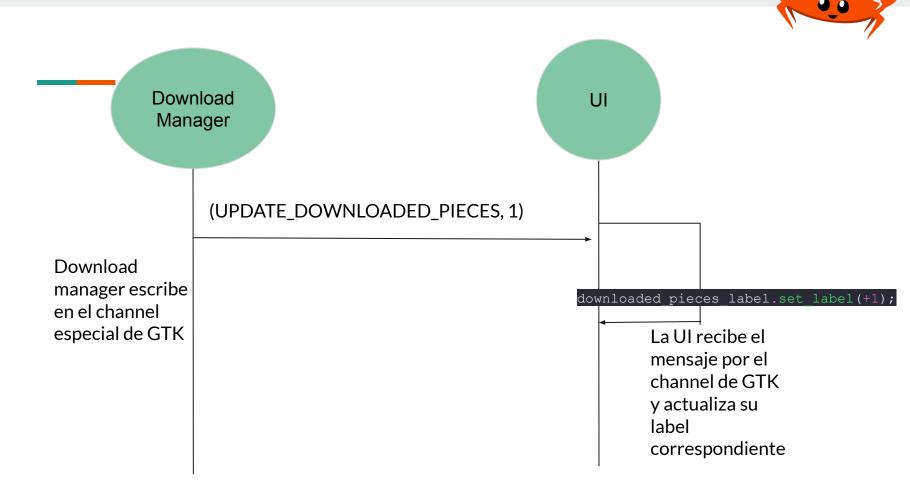




#### Logger



#### Interfaz de Usuario



#### Interfaz de Usuario



0%

#### Pestaña Info General

Bittorrent Client - CrabRave

ubuntu-22.04-desktop-amd64.iso.torrent ubuntu-21.10-desktop-amd64.iso.torrent

General Info Download Details

**File Name:** ubuntu-22.04-desktop-amd64.iso

Downloaded Pieces: 49 Total Size: 3 GE

Downloaded Pieces:49Total Size:3 GBVerified Pieces:49Peers Quantity:50

Active Connections: 8



#### Interfaz de Usuario

# 0.0

#### Pestaña Detalles de Descarga: Conexiones activas

Bittorrent Client - CrabRave				
ubuntu-22.04-des	ktop-amd64.iso.torrer	nt ubuntu-21.10-desktop-amd6	64.iso.torrent	
General Info D	ownload Details			
ID		ΙΡ	Port	Downloaded Speed
ΓR3000-z3jw46001		40:3418:0:d250:99ff:fe98:1ea6	51413 51413	2048 bytes / sec
TR3000-1e80dp5n	2	2a01:4f9:4a:35da::2		1260 bytes / sec
-TR3000-arhnrlas2 -TR2940-iz1a3s02		2602:fdb8:131:4001::c:1 2a00:1370:8196:2b6:1a31:bfff:fe0d:aeec		1820 bytes / sec 1024 bytes / sec
DE13F0-YRDzC-AT		2001:41d0:a:2448::1	60562 58276	2730 bytes / sec
TR2940-sbcsuc03v		2a02:2698:902a:18e:208:9bff:fece:443d		862 bytes / sec
TR2940-p8uvaml2d	.,	2405:9800:bc10:31fd:6600:6aff:fe4e:9e91		1024 bytes / sec
-TR3000-qs253l0ed		2600:6c40:5600:221:d0ad:b6ce:a14c:48ec		1820 bytes / sec
TR3000-u92ag7nx		2001:67c:2564:331:a60:6eff:fee8:80b8		1820 bytes / sec
-TR2920-txxuqhqy		2a03:75c0:1e:1a44::1982		2048 bytes / sec
-TR2940-urfua24ac		8:6010:212:ec4:7aff:fe71:7f0c	51413	2048 bytes / sec
-TR3000-su27aj00v		:2f46:f701:3c4a:92ff:fe03:aa47	51413	1024 bytes / sec
-TR2940-yez5l3i62		):4831:9700:ba27:ebff:fe91:60cd	51316	2048 bytes / sec
-TR2940-3hzgvrrul		2600:1700:42c6:31f:dea6:32ff:febc:93c0		2048 bytes / sec
TR2920-tembyn6h		2a03:75c0:1e:1a44::1982		0 bytes / sec
TR3000-z3jw46001		2a0a:a540:3418:0:d250:99ff:fe98:1ea6		0 bytes / sec
TR3000-re0yzuom	0e97 2a01:e0a	2a01:e0a:b2e:3050:a6b1:c1ff:fe0c:98b5		0 bytes / sec
DE13F0-YRDzC-AT	PHc6	2001:41d0:a:2448::1		0 bytes / sec



#### **Particularidades**

## **Preguntas?**

