



IPFS

InterPlanetary File System with Node.js

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Let's Start...



#IPFS&NODEJS



Checklist



Blockchain



Decentralized Web



IPNS



peer-to-peer sharing



...

IPFS



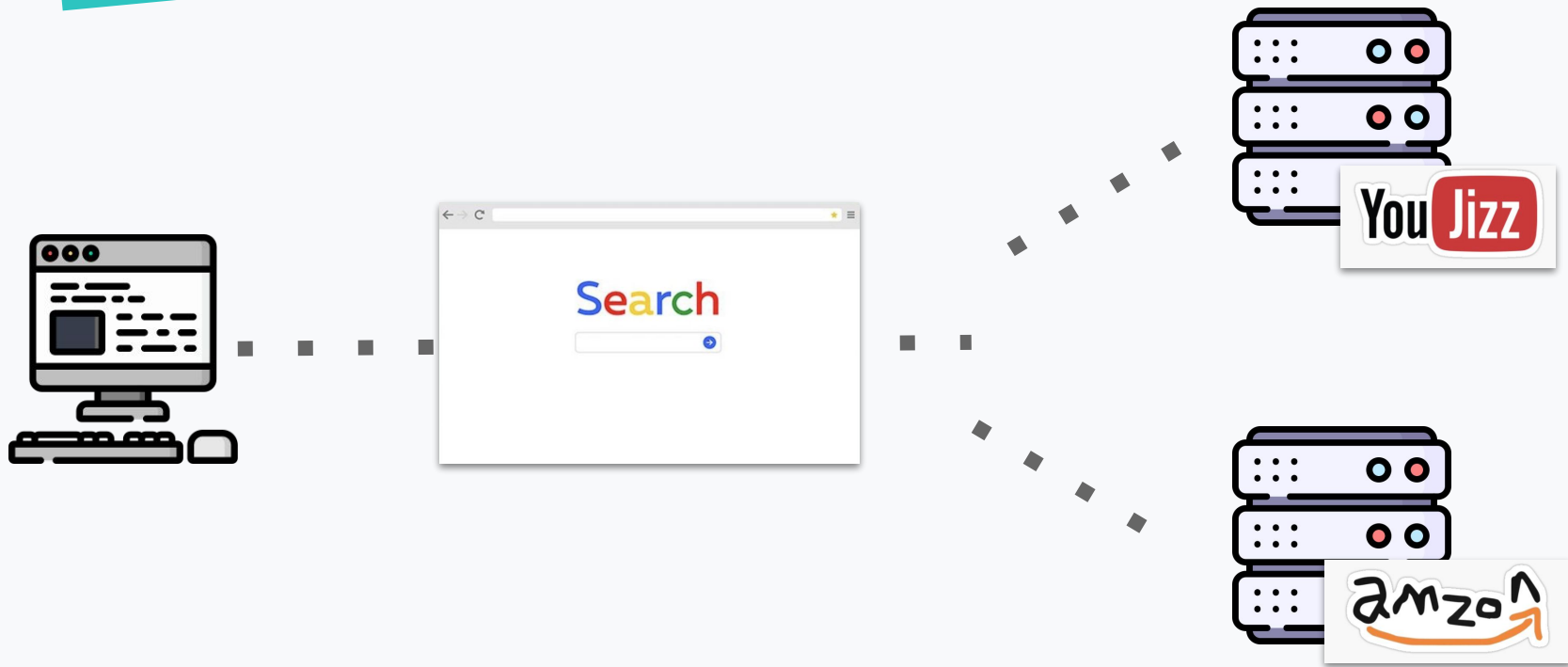
101

What is??

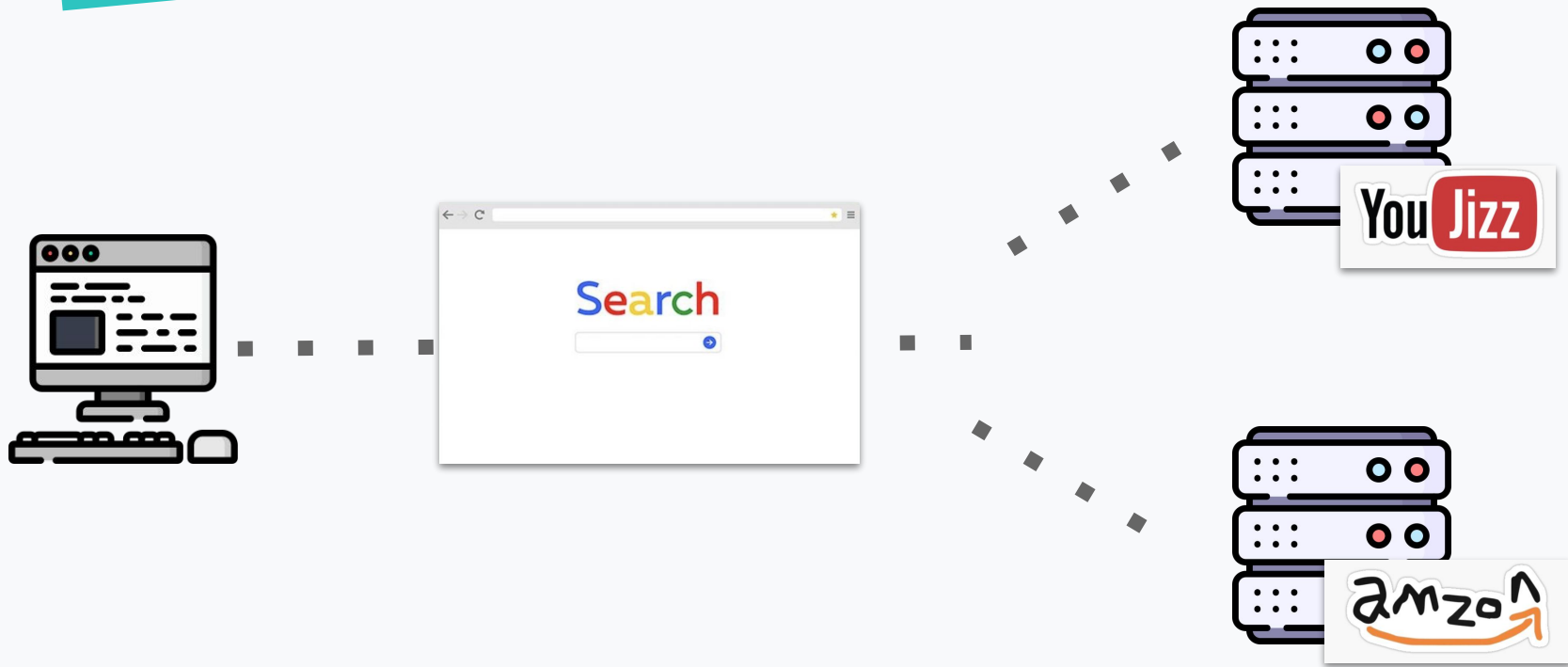


IPFS is a **distributed** system for **storing** and **accessing** files, websites, applications, and **data**.

T Old Fashion www



T Old Fashion www



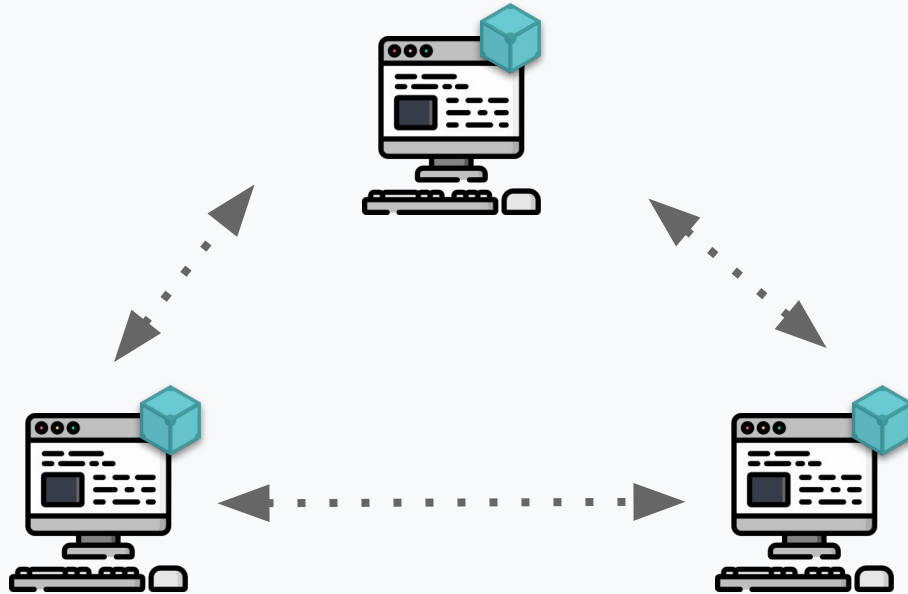
HI 00482 00046

G A M E O V E R



IFPS

The
FUTURE



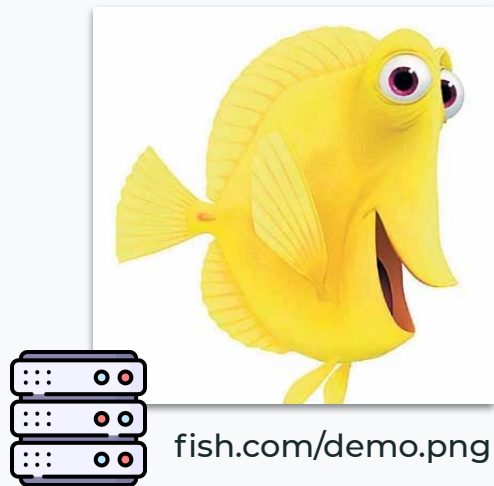
IPFS



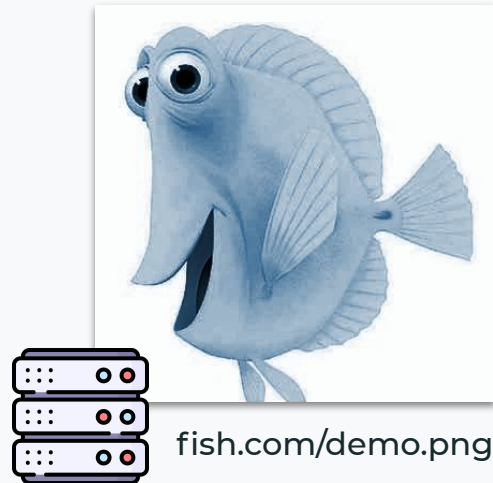
101

Why

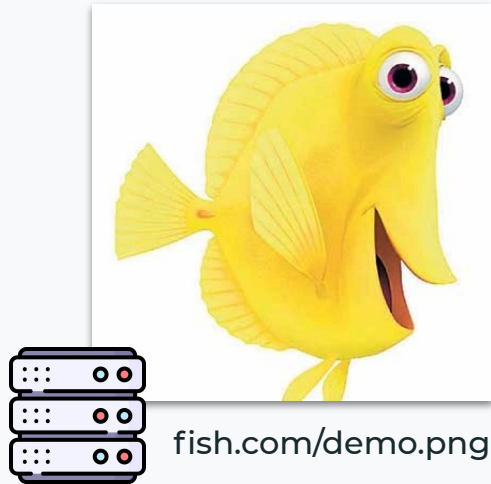
INTEGRITY & VERIFIABILITY



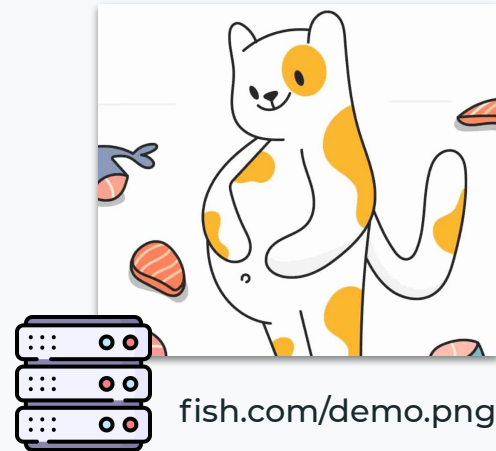
fish.com/demo.png



Integrity & Verifiability



fish.com/demo.png



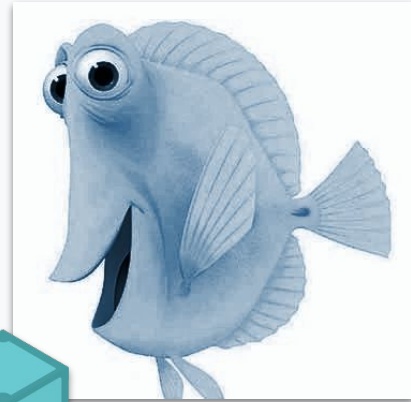
Integrity & Verifiability



Qmc5AgqniYDkhEF
5E5KszvbeiGzTL5
oDj8g9aRkMfCDP8
6



!=



QmepTjReFgKX49e
1fyqLKQvc6tUR6A
LerWfAfghHAQurn
i

Integrity & Verifiability



- ✓ Location based Addressing
- ✓ Mutable
- ✓ Trusted Sources - Centralized



- ✓ Content based Addressing
- ✓ Immutable
- ✓ Fetch - from anyone - Distributed

Deduplication & Content Hashing



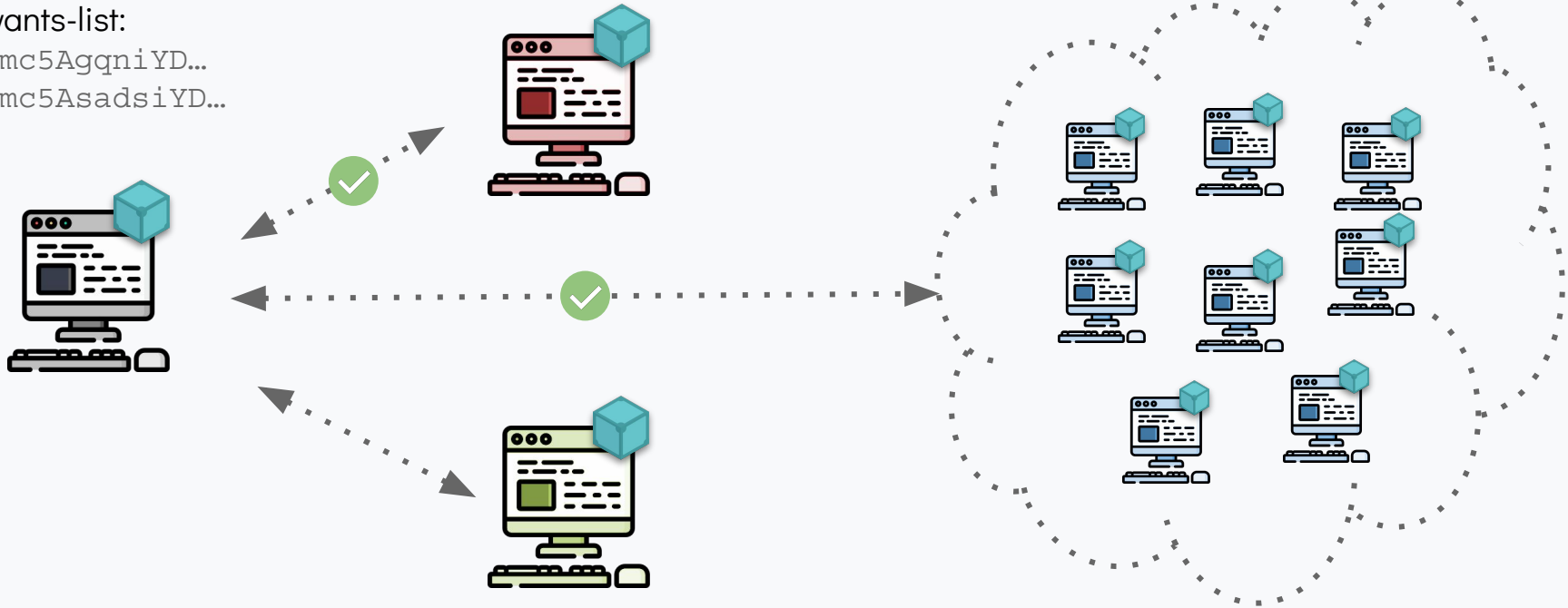
Discoverability - Bitswap

DHTs
Distributed Hash Tables

wants-list:

Qmc5AgqniYD...

Qmc5AsadsiYD...



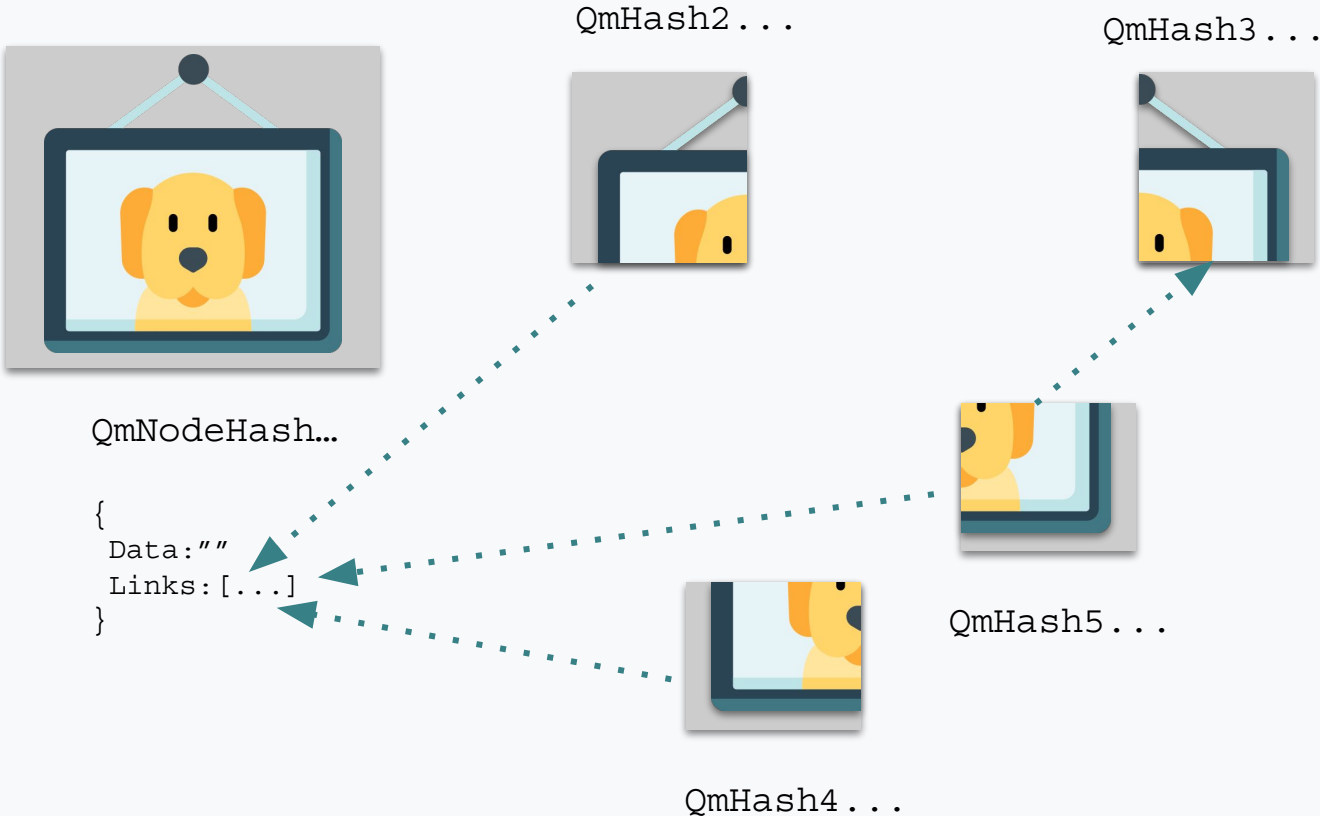
IPFS

101



How works ?

Add files to IPFS





CID - Anatomy

Binary

QmZjE6sk3mNKmSAw5X9cdyGKkikdqM7PytSkAwz3xpzcDz

<CID-VERSION>

<IPLD-FORMAT>

<MULTIHASH>

String

bafybeia3pwwl7pa4wym63kakrugjsgkbfqwwwmfk227dfmsfxgwgh4zdy

<BASE>

BASE(

<CID-VERSION>

<IPLD-FORMAT>

<MULTIHASH>

)

IPFS

101

How can I use ?



On Browser | Support

IPFS Gateway



ipfs.io/ipfs/QmepTjReFgKX49e1fyqLKQvc6tUR6ALerWfAfghHAQurni

IPFS Native Protocol



IPFS | ipfs://bafybeiemxf5abjwbikoz4mc3a3dla6ual3jsgpdr4cjr3oz3evfyavhwq/wiki/Vincent_van_Gogh.html

Vincent van Gogh

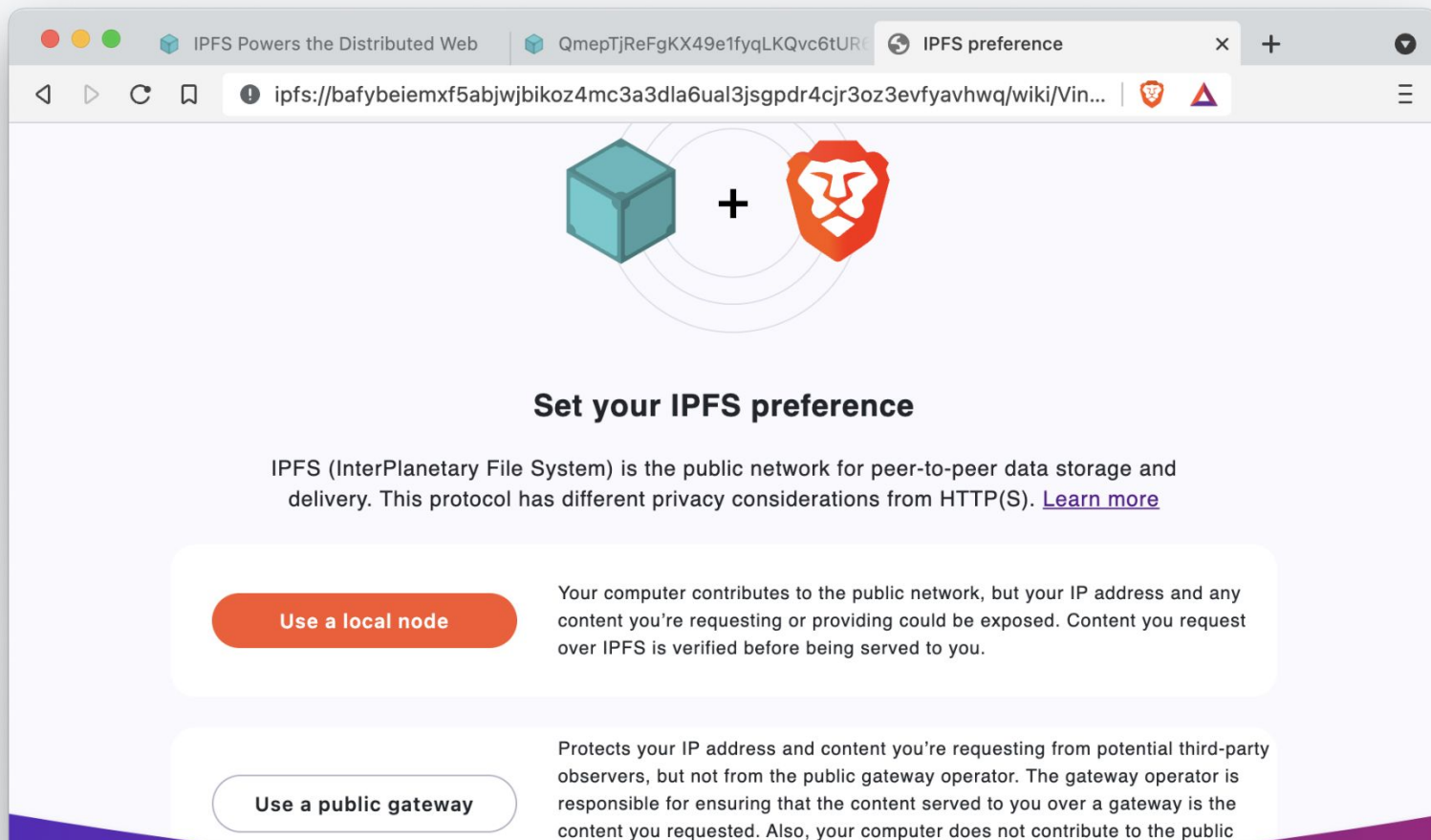
"Van Gogh" redirects here. For other uses, see [Van Gogh \(disambiguation\)](#).

Vincent Willem van Gogh (Dutch: [ˈvɪnsɛnt ˈvɪləm van ˈɣox]; ^[note 1] 30 March 1853 – 29 July 1890) was a Dutch **Post-Impressionist** painter who is among the most famous and influential figures in the history of Western art. In just over a

Vincent van



On Browser | Support





The screenshot shows a web browser window with the following details:

- Browser Tabs:** IPFS Powers the Distributed Web, QmepTjReFgKX49e1fyqLKQvc6tUR..., IPFS preference.
- Address Bar:** ipfs://bafybeiemxf5abjwbikoz4mc3a3dla6ual3jsgpdr4cjr3oz3evfyavhwq/wiki/Vin... | Brave logo, IPFS logo.
- Header:** A blue cube (IPFS logo) and a red lion head (Brave logo) separated by a plus sign, with concentric circles below them.
- Title:** Set your IPFS preference
- Text:** IPFS (InterPlanetary File System) is the public network for peer-to-peer data storage and delivery. This protocol has different privacy considerations from HTTP(S). [Learn more](#)
- Options:**
 - Use a local node** (highlighted in orange): Your computer contributes to the public network, but your IP address and any content you're requesting or providing could be exposed. Content you request over IPFS is verified before being served to you.
 - Use a public gateway** (in a light gray box): Protects your IP address and content you're requesting from potential third-party observers, but not from the public gateway operator. The gateway operator is responsible for ensuring that the content served to you over a gateway is the content you requested. Also, your computer does not contribute to the public

On Browser | Browser Companion

- ✓ Compatible browser extensions that allow `ipfs://`


Firefox ↗ Firefox for Android ↗	Chrome ↗ Brave ↗ Opera ↗ Edge ↗
 GET THE ADD-ON ↗	 Available in the Chrome Web Store ↗

On Browser | Status



<https://arewedistributedyet.com/>

#IPFS&NODEJS










are we distributed yet?

Let's make **peer-to-peer** a first-class part of the web.

We're close. We need to fix issues in existing p2p features like webRTC and rally support for new URIs and browser APIs, to create a level playing field where a great user experience doesn't require a centralized system.

P2P enthusiasm

Are they excited about the distributed web and are they publicly committed to making it happen?













BEAKER

Yes! A *peer-to-peer* browser with tools to create and host websites. Don't just browse, build it. <https://beakerbrowser.com>

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- **Distributed web schemes have been safelisted in Chrome 86**  's implementation of **custom handlers**  and **registered at IANA**  .
- Chrome 89 will allow browser extensions to register cross-origin handlers or handlers for schemes with prefix `ext+` . Refinement is pending for the **permission UI**  .
- Firefox 84 marks `http://*.localhost/` URLs as **secure context**  , which means websites loaded from local **subdomain gateway**  will have access to the same Web APIs as HTTPS version.
- Firefox 84 has improved support for **loading locally delivered mixed-resources**  . Patches have also been submitted to WebKit but are pending on reviews and discussions.
- Work is in progress to improve Chromium's consistency and specification compliance regarding the notion of **secure contexts**  , including removing non-standard **localhost**  **names**  .
- Miscellaneous other fixes have landed for the Firefox and Chromium's implementations of custom handlers.

How About



with

NODE.js

DEMO
TIME...

Ethical

Decentralisation

- ✓ Digital Freedom
- ✓ Break Data Silos - DWEB
- ✓ Bad Actors - Blacklisting
- ✓ Censorship



**Merci
Muchas
Gracias
Thanks
Obrigado
Спасибо**

