



Deno: 1.0, and what has happened since

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Who am I?

- Luca Casonato
- 19 years old
- Work full-time at the Deno company
- Core contributor on the Deno project
- Previously did web dev consultancy

What is Deno?

- New server side JavaScript/TypeScript runtime
- Builds on modern JS language features
 - ES Modules
 - Promises
 - Async iterators
- Uses Web APIs where possible
- Import resolution works like in the browser
 - `import { red } from "https://deno.land/std@0.95.0/fmt/colors.ts";`
- Built in tooling
 - Test runner
 - Formatter
 - Linter
 - Compile to single executable

Pre 1.0

- Ryan introduced Deno in his talk “10 Things I regret about Node.js”
- Originally written in Go, then moved to Rust

Introductory Demo: HTTP requests

- Get URL from first command line argument
- Fetch URL
- Get `Server` header
- Print header value to console (in magenta)

```
$ deno run --allow-net curl.ts https://google.com  
Server: gws
```

```
$ deno run --allow-net curl.ts https://www.cloudflare.com  
Server: cloudflare
```

```
$ deno run --allow-net curl.ts https://github.com  
Server: GitHub.com
```

Deno 1.0

May 13th 2020

- Stabilization of many builtin APIs
 - FS API
 - Subprocess API
 - OS API (env vars, process args)
 - Fetch API (outbound HTTP)
 - Networking API (inbound/outbound TCP/UDP)
 - Typescript support
 - Web Workers
 - Web Assembly
- Shipped with built-in tooling:
 - Formatter
 - Test runner
 - Doc generator
 - Dependency viewer
- ``deno repl``
- ``deno eval``

Deno 1.1

June 12th 2020

- New built in linter: ``deno lint``
 - 100x faster than eslint
 - Supports all “recommended” rules from eslint
 - Can be used for Browser / Node projects too
 - Works on JavaScript, TypeScript and JSX files
- ``deno eval -p``
 - Quickly evaluate some JavaScript or TypeScript and print the result

Deno 1.2 & 1.3

July 13th 2020 & August 13th 2020

- Add performance timing API (`performance.now()`)
- Custom HTTP clients for `fetch`
 - Support for custom CA certificates
 - Soon also support for mTLS
- Add `FileReader` Web API

Deno 1.4

September 13th 2020

- WebSocket API
 - Outbound websockets
 - Web standard API
- `--watch` for automatic program restart on file change
- Built-in coverage for `deno test`
 - `deno test --coverage`
- CSS styles in `console.log`
 - Web compatible
 - `console.log("%cHello World", "color: red");`

Deno 1.5

October 27th 2020

- New fast built-in bundler
 - Up to 15x faster than bundling with TSC
 - Built-in tree-shaking
 - Outputs an ES Module
- Support for ``alert``, ``confirm``, ``prompt``
 - Same synchronous prompting APIs available on the Web
- Improvements to the REPL
 - Tab completions
 - Code syntax highlighting
 - Top level await support

Deno 1.6

December 8th 2020

- ``deno compile``
 - Build self contained, standalone executables
 - `deno compile --unstable -A https://deno.land/std@0.95.0/http/file_server.ts`
 - Most upvoted GitHub issue
- ``deno lsp``
 - Built-in language server for Deno support in IDEs and editors
 - Code completion, hover hints, etc
 - ``deno fmt`` + ``deno lint`` integration
 - Registry import completions
- Support for Apple M1

Deno 1.7

January 19th 2020

- Cross compilation support in ``deno compile``
- Data URL support in imports and Web Workers
- ``Deno.resolveDns`` API
 - Access to system DNS resolver, or custom nameserver
- Markdown support in ``deno fmt``
- Scoped, per Web Worker permissions
- Support for ``globalThis.location``, and relative fetch
 - Useful for isomorphic JavaScript and Server Side Rendering

Deno 1.8

March 2nd 2020

- Experimental WebGPU support
 - New browser API for interacting with the GPU
 - Useful for general purpose GPU (Machine Learning), or rendering
- Web Internationalization API (`Intl`)
- Revamped `deno coverage`
 - Support for lcov format
- Stabilization of import maps
- `Deno.permissions`
 - Prompt users for permissions programmatically
- JSON support in `deno fmt`

Deno 1.9

April 13th 2020

- Native HTTP web server
 - Support for HTTP/1.1 and HTTP/2 out of the box
 - HTTP/3 coming soon
 - Web standard `Request` and `Response` objects
 - <https://deno.land/benchmarks>
- Blob URL support
 - `URL.createObjectURL`
- Data and blob URL support in fetch

Deno 1.10

May 11th 2020

- Per test permissions in `Deno.test`
- Run multiple test modules in parallel
- `--watch` support for `deno test`
- Web Storage API
 - `localStorage` for persistent storage without the need for FS permissions

Contributors



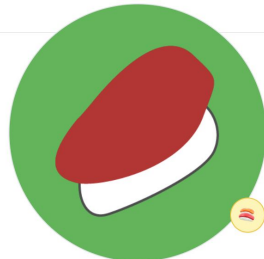
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magurotuna



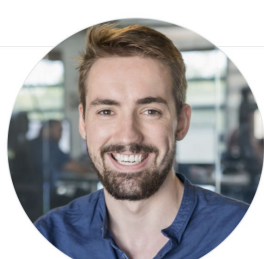
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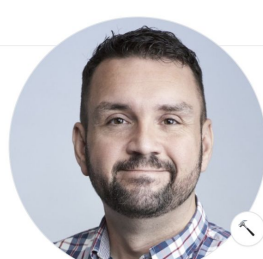
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+ 586 others

Thanks for listening :-)

- Want to try it out?
 - https://deno.land/manual/getting_started
- Questions / need help / contribute?
 - <https://discord.gg/deno>
 - <https://github.com/denoland/deno>
- Want to talk to me?
 - <https://twitter.com/lcasdev>
 - hello [at] lcas.dev
 - @lucacasonato on Deno Discord

What's on the horizon?

- Support for testing documentation comments
- `BroadcastChannel` for inter-process communication
- Revamped, easier to use subprocess API
- Out of the box IndexedDB support
- `WebSocketStream` support - modern streams based websockets

```
/**
 * ``ts
 * import { example } from "../example.ts";
 *
 * example();
 * ``
 */
export function example() {
  // ...
}
```