

An aerial photograph of a modern, multi-lane highway bridge that curves along a steep, rocky cliffside overlooking the ocean. The bridge is supported by several tall, dark concrete pillars. The ocean is a deep blue, and the sky is overcast. The overall mood is dramatic and industrial.

**THE RISE OF
OPEN INFRASTRUCTURE**



HELLO!

My name is Thierry Carrez

General Manager at Open Infrastructure Foundation
(previously known as the OpenStack Foundation)

Vice-chair at Open Source Initiative (OSI)

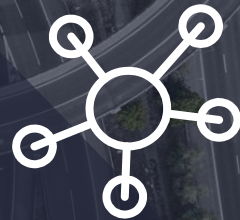
@tcarrez@fosstodon.org on the Fediverse



1. WHAT IS OPEN INFRASTRUCTURE

Providing infrastructure using open source solutions

Users



Applications

Users

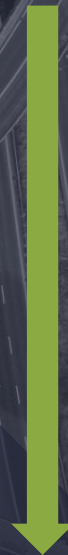


Physical hardware

Users

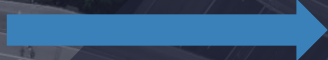


Application
developers
& deployers



Physical hardware

Users



Application
developers
& deployers

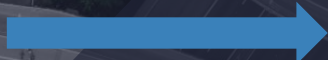


Hardware virtualization



Physical hardware

Users



Application
developers
& deployers



IaaS APIs



Hardware virtualization



Physical hardware

Users



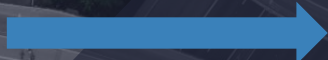
Cloud-native applications



Programmable infrastructure



Users



Application
developers
& deployers



IaaS APIs

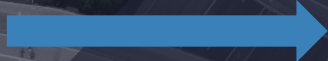


Hardware virtualization



Physical hardware

Users



Application
developers
& deployers



Application deployment APIs



IaaS APIs



Hardware virtualization



Physical hardware

Users

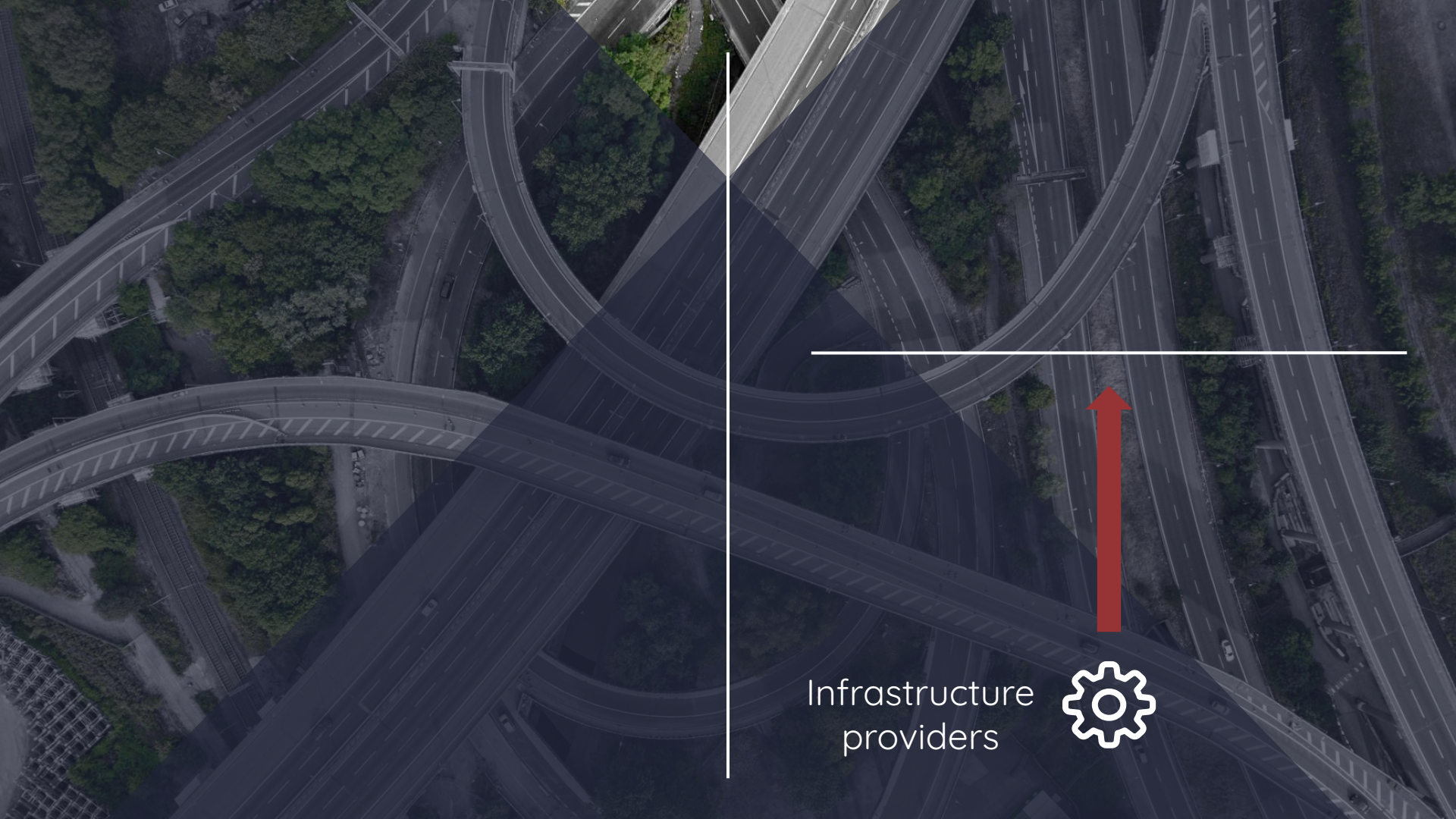


Application
developers
& deployers



Infrastructure
providers






Infrastructure
providers





A close-up photograph of a dark metal chain-link fence. The fence is the primary focus, with its diamond-shaped mesh pattern clearly visible. The background is out of focus, showing a bokeh effect of city lights in various colors, including warm yellows and oranges, and cooler reds and blues. The overall lighting is dim, suggesting a nighttime or dusk setting.

→ Availability



→ Availability

→ Sustainability

- 
- Availability
 - Sustainability
 - Transparency and self-service

- 
- Availability
 - Sustainability
 - Transparency and self-service
 - Influenceability

CAPABILITIES



One size does not fit all.

Some features are just overpriced (GPUs).

Some features are just missing.

COMPLIANCE

Legal requirements around data locality.

Confidentiality around strategic companies.





COST


Cost compared to relying on hyperscale public clouds

Cost compared to providing infrastructure using proprietary solutions or starting from scratch



A photograph of a large crowd of people silhouetted against a sunset sky. The people are standing on a beach, and their reflections are visible in the wet sand. The sky is a mix of orange, yellow, and purple. The text "→ Enable interoperability" is overlaid in white in the center of the image.

→ Enable interoperability

A photograph showing the silhouettes of a large group of people standing on a beach at sunset. The sky is a gradient of orange, yellow, and purple, and the water in the foreground is calm, reflecting the silhouettes of the people. The overall mood is serene and communal.

→ Enable interoperability

→ Make technology available to all

- 
- A photograph showing the silhouettes of a large crowd of people standing on a beach or a similar reflective surface at sunset. The sky is a gradient of orange, yellow, and purple, and the ground is dark and reflective, mirroring the silhouettes of the people. The crowd is scattered across the frame, with some individuals in the foreground and others in the distance. The overall mood is serene and communal.
- Enable interoperability
 - Make technology available to all
 - Allow permissionless innovation

- 
- A background image showing the silhouettes of a large crowd of people standing on a beach or pier at sunset. The sky is a gradient of purple and orange, and the water in the foreground reflects the silhouettes and the sky. The text is overlaid in the center-right of the image.
- Enable interoperability
 - Make technology available to all
 - Allow permissionless innovation
 - Reduce waste



OpenInfra

FOUNDATION

Platinum Members



Gold Members



Silver Members





2. THE PAST DECADE

The birth of Open Infrastructure

A background image showing a stack of cut logs. The logs are arranged in a dense, overlapping pattern. The lighting is dramatic, with a dark blue diagonal shadow running from the top-left towards the bottom-right, creating a sense of depth and highlighting the textures of the wood. The text is overlaid on the left side of the image.

OPENSTACK

→ A pure IaaS cloud

A background image showing a stack of cut logs. The logs are arranged in a dense, overlapping pattern. The top surfaces of the logs are light brown and show the natural wood grain. The sides of the logs are dark, almost black, creating a strong contrast. A diagonal line runs from the top right towards the bottom left, separating the lighter top surfaces from the darker sides.

OPENSTACK

- A pure IaaS cloud
- For private and public use cases

A background image showing a stack of cut logs. The logs are arranged in a dense, overlapping pattern. The top surface of the logs is a light brown, fibrous texture, while the sides are a darker, smoother wood. The lighting is dramatic, with a dark blue diagonal shadow running from the top left towards the bottom right, creating a sense of depth and highlighting the texture of the wood.

OPENSTACK

- A pure IaaS cloud
- For private and public use cases
- Developed under the 4 Opens

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OPENSTACK

- A pure IaaS cloud
- For private and public use cases
- Developed under the 4 Opens
- A huge success

KUBERNETES

→ In OpenStack footsteps

KUBERNETES

- In OpenStack footsteps
- Standardizing the app deployment layer

KUBERNETES

- In OpenStack footsteps
- Standardizing the app deployment layer
- Assumes a cloud underneath

KUBERNETES

- In OpenStack footsteps
- Standardizing the app deployment layer
- Assumes a cloud underneath
- A huge success too

OTHER INGREDIENTS



OTHER INGREDIENTS

→ Ceph



OTHER INGREDIENTS

→ Ceph

→ Kata Containers



OTHER INGREDIENTS



- Ceph
- Kata Containers
- ... and all the others



3. THE NEXT DECADE

The reign of Open Infrastructure



OPENSTACK IS MORE USED THAN EVER

→ 60% YoY growth in our 2022 user survey



OPENSTACK IS MORE USED THAN EVER

- 60% YoY growth in our 2022 user survey
- 40 million CPU cores managed by OpenStack

40M CPU CORES

RETAIL/E-COMMERCE



FINANCIAL SERVICES



ACADEMIC/RESEARCH



TELECOM



ENERGY/TRANSPORTATION/GOVERNMENT



MANUFACTURING



WEB & ENTERTAINMENT



PUBLIC CLOUD





OPENSTACK IS MORE USED THAN EVER

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- 40 million CPU cores managed by OpenStack
- Existing users increasing their footprint



OPENSTACK IS MORE USED THAN EVER

- 60% YoY growth in our 2022 user survey
- 40 million CPU cores managed by OpenStack
- Existing users increasing their footprint
- But also lots of new users

NEW PUBLIC CLOUDS

 binero

 cloudfire

infomaniak


nipa.cloud

OROCK
TECHNOLOGIES



NEW PUBLIC CLOUDS

→ Digital sovereignty



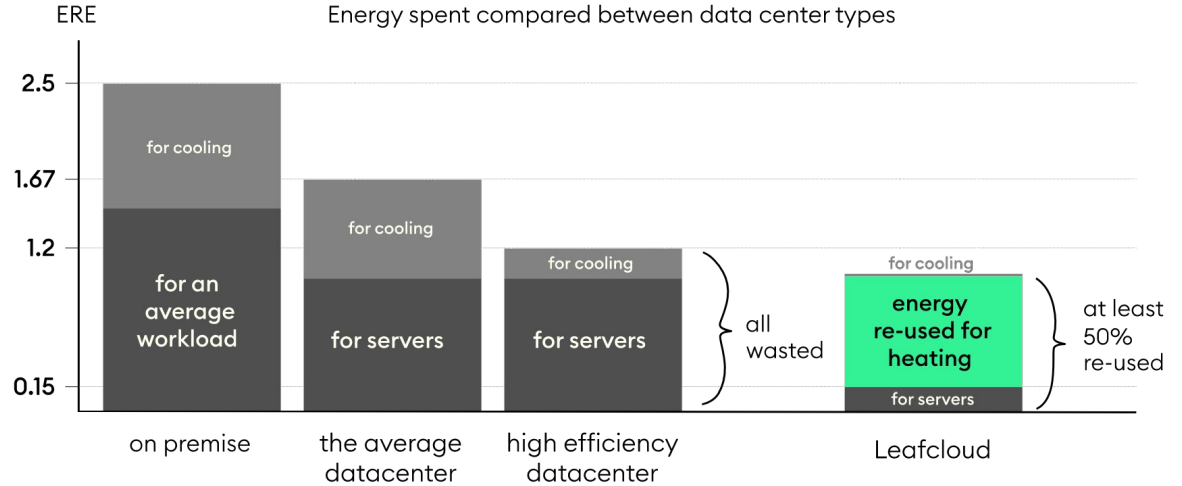
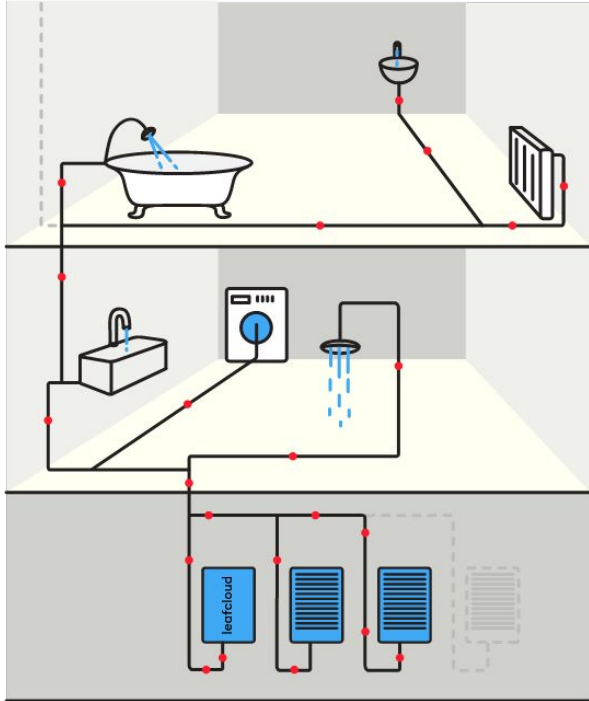
NEW PUBLIC CLOUDS

- Digital sovereignty
- Drives adoption in research as well

**INNOVATION
EVERYWHERE**







**MORE
OPENINFRA**



MORE OPENINFRA

→ [More projects](#)



MORE OPENINFRA

- More projects
- More adoption



MORE OPENINFRA

- More projects
- More adoption
- Join us! openinfra.dev/join



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VANCOUVER!

→ JUNE 13-15, 2023

 OpenInfra
SUMMIT > VANCOUVER '23

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openinfra.dev/summit/vancouver-2023



THANKS!

A close-up photograph of a human hand, palm up, holding a small, glowing pink particle. The particle is bright and has a textured, crystalline appearance. The background is dark, and the lighting is dramatic, highlighting the hand and the particle. A diagonal line runs across the image, separating the dark background from a lighter, blue-tinted area on the left.

**Learn more
about Open Infrastructure at:**
<https://openinfra.dev>

Questions?

You can reach me at @tcarrez@fosstodon.org on Mastodon
Or email me at thierry@openinfra.dev

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