cloud STACK COLLABORATION CONFERENCE

Working with CloudStack

For over 10 years

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Fill in the CloudStack User Survey

Help us understand the CloudStack Ecosystem

Who am I?

- Wido den Hollander (1986)
- Born and live in the Netherlands
- Two sons (2020 and 2022)
- CTO @ Your.Online
  - Strategic CTO, oversee our companies, no daily involvement
  - Started my own hosting company in 2003
  - Techie at heart 🤓
- Open Source & Tech
  - Ceph evangelist since 2008
    - Started to work with Ceph *before* version Argonaut
    - Founded **42on** and *used* to be Ceph Trainer & Consultant
  - Apache CloudStack developer and PMC member
    - Since 2011
  - IPv6 *fanatic*

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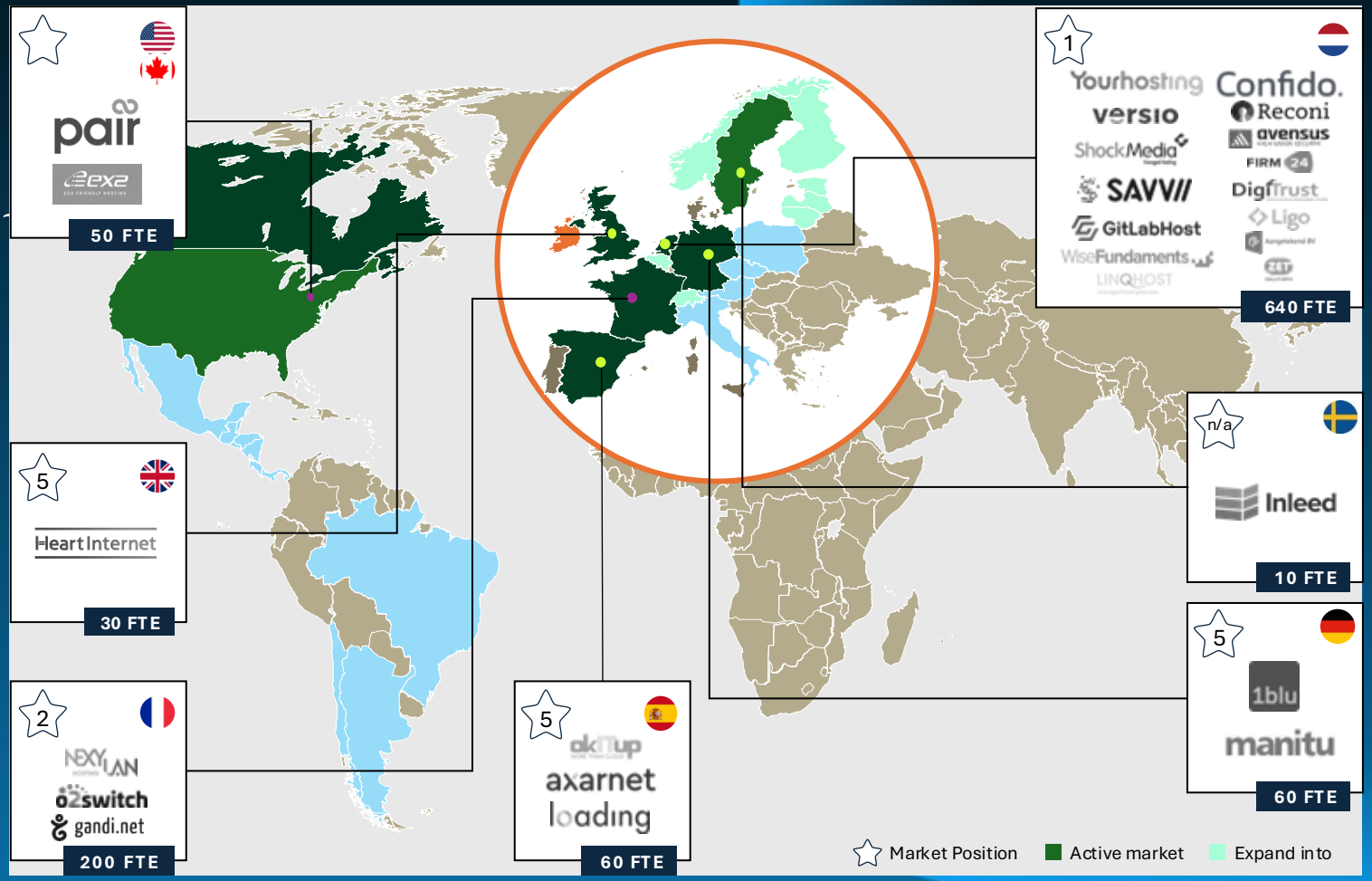
Who is Your.Online?

Your.Online is a global group specializing in **Online Presence**. Operating across Europe and North America, our companies provide a range of online services, enabling businesses and individuals to establish and grow their digital footprint.

Our portfolio includes services such as Domain Registration, Web Hosting, VPS, Dedicated Servers, and much more.

A significant number of our companies use **Apache CloudStack** as the foundation underneath their infrastructure. The number of deployments is growing.

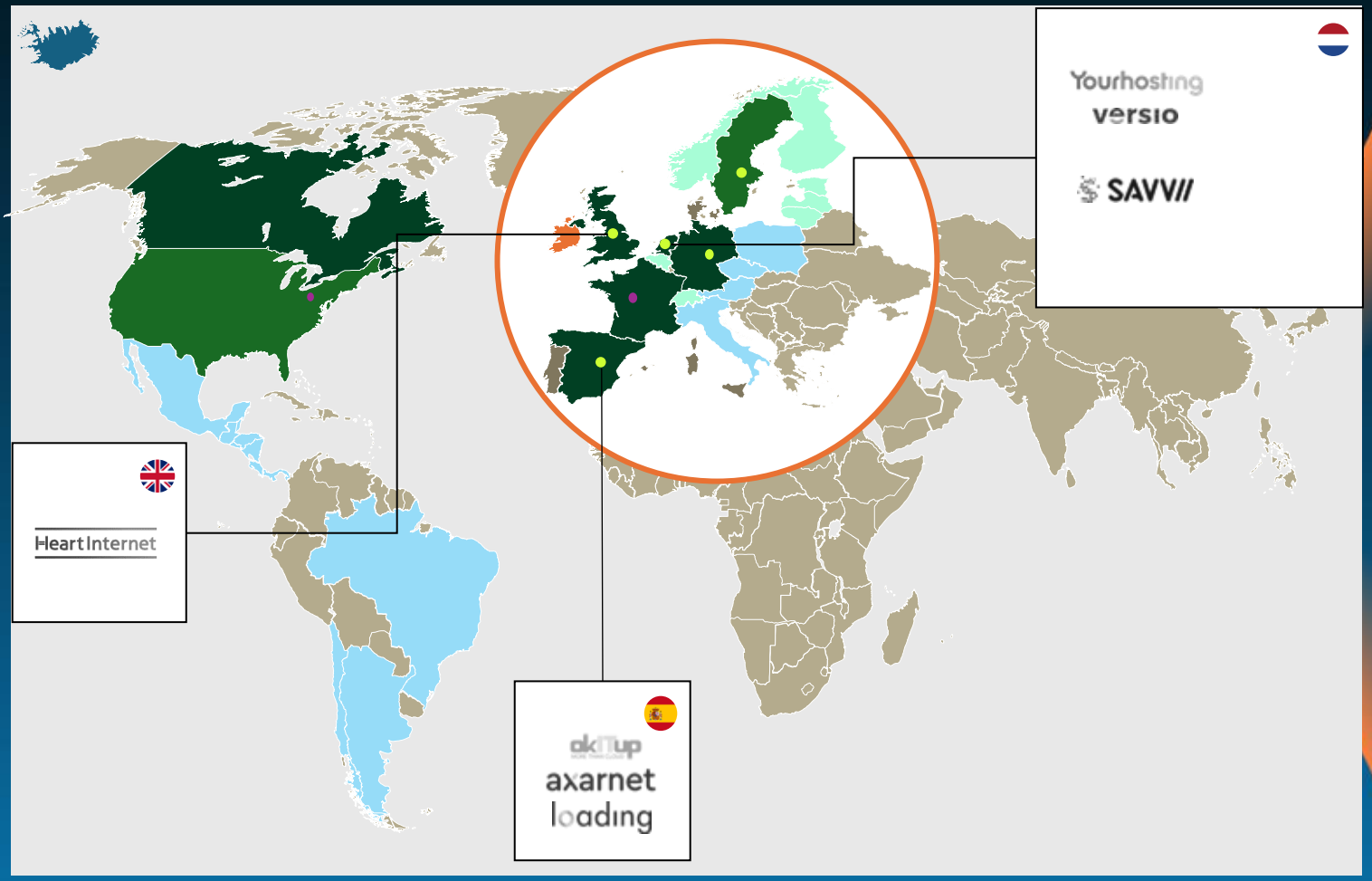


How are we using CloudStack?

Various brands within Your.Online are actively using CloudStack with large scale deployments:

- Yourhosting (NL)
  - Also hosts Savvii (NL)
- Axarnet (ES)

In 2026 we will deploy a new CloudStack environment in our datacenter in Leeds, UK to modernize the infrastructure of Heart Internet



How it all started

- In 2004 I co-founded a webhosting company in the Netherlands
- We had developed our own ‘orchestrator’ around Libvirt+KVM
  - A collection of Bash scripts with Dialog
- We wanted to start to offer public cloud
  - Our search for something new started!

Our shortlist

- OpenStack
- Eucalyptus
- Cloud.com
- DYI

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Why CloudStack?

- We discovered this project called “Cloud.com” and we decided to give it a try
  - We had it up and running <48h
- Not long after I signed my contributer agreement
- The rest is history!

Peder Ulander
echosign@echosign.com

Aan Wido den Hollander

20-12-2011 09:22

Antwoord naar Peder Ulander <peder@cloud.com>

The Cloud.com Individual Contributor Agreement (between Wido den Hollander and Cloud.com) is Signed and Filed!

cloud.com
Send. Sign. Done.

POWERED BY
Adobe Sign

The Cloud.com Individual Contributor Agreement (between Wido den Hollander and Cloud.com) is Signed and Filed!

From: Peder Ulander (Cloud.com)
To: Wido den Hollander (wido@widodh.nl)

Attached is a signed copy of the **Cloud.com Individual Contributor Agreement**.

Copies have been automatically sent to all parties to the agreement.

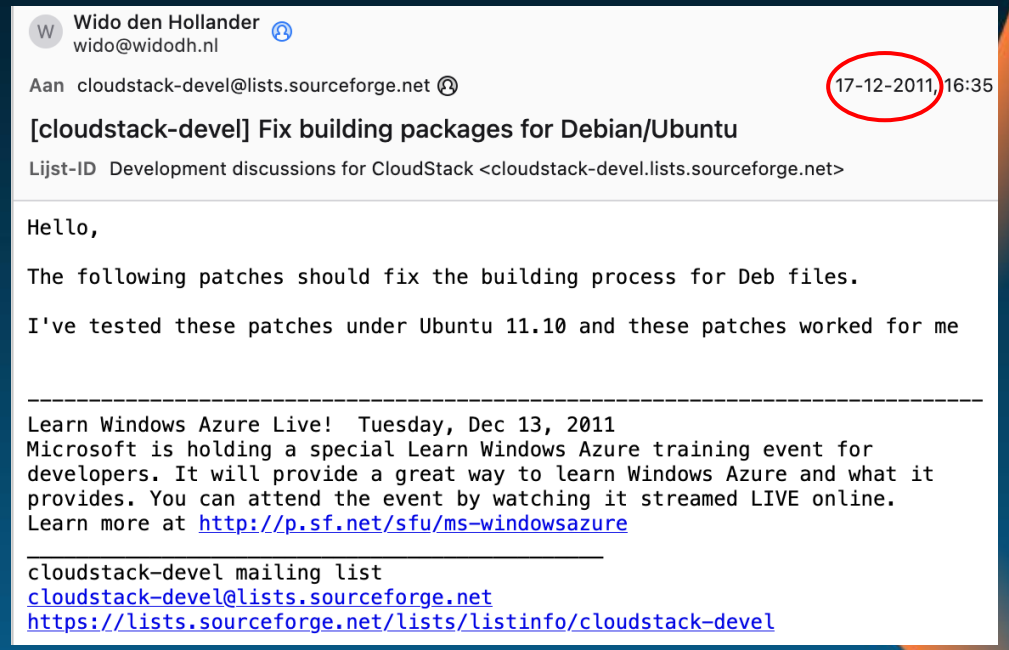
You can view a copy in your EchoSign account.

Why use EchoSign:

- Exchange, Sign, and File Any Document. In Seconds!
- Set-up Reminders. Instantly Share Copies with Others.
- See All of Your Documents, Anytime, Anywhere.

Why CloudStack?

- It just worked
- It wasn't too complex
- I submitted my first patch soon
  - More patches followed in the years to come



Wido den Hollander
wido@widodh.nl

Aan cloudstack-devel@lists.sourceforge.net 17-12-2011, 16:35

[cloudstack-devel] Fix building packages for Debian/Ubuntu

Lijst-ID Development discussions for CloudStack <cloudstack-devel.lists.sourceforge.net>

Hello,

The following patches should fix the building process for Deb files.

I've tested these patches under Ubuntu 11.10 and these patches worked for me

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Learn Windows Azure Live! Tuesday, Dec 13, 2011
Microsoft is holding a special Learn Windows Azure training event for developers. It will provide a great way to learn Windows Azure and what it provides. You can attend the event by watching it streamed LIVE online.
Learn more at http://p.sf.net/sfu/ms-windowsazure

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cloudstack-devel mailing list
cloudstack-devel@lists.sourceforge.net
https://lists.sourceforge.net/lists/listinfo/cloudstack-devel

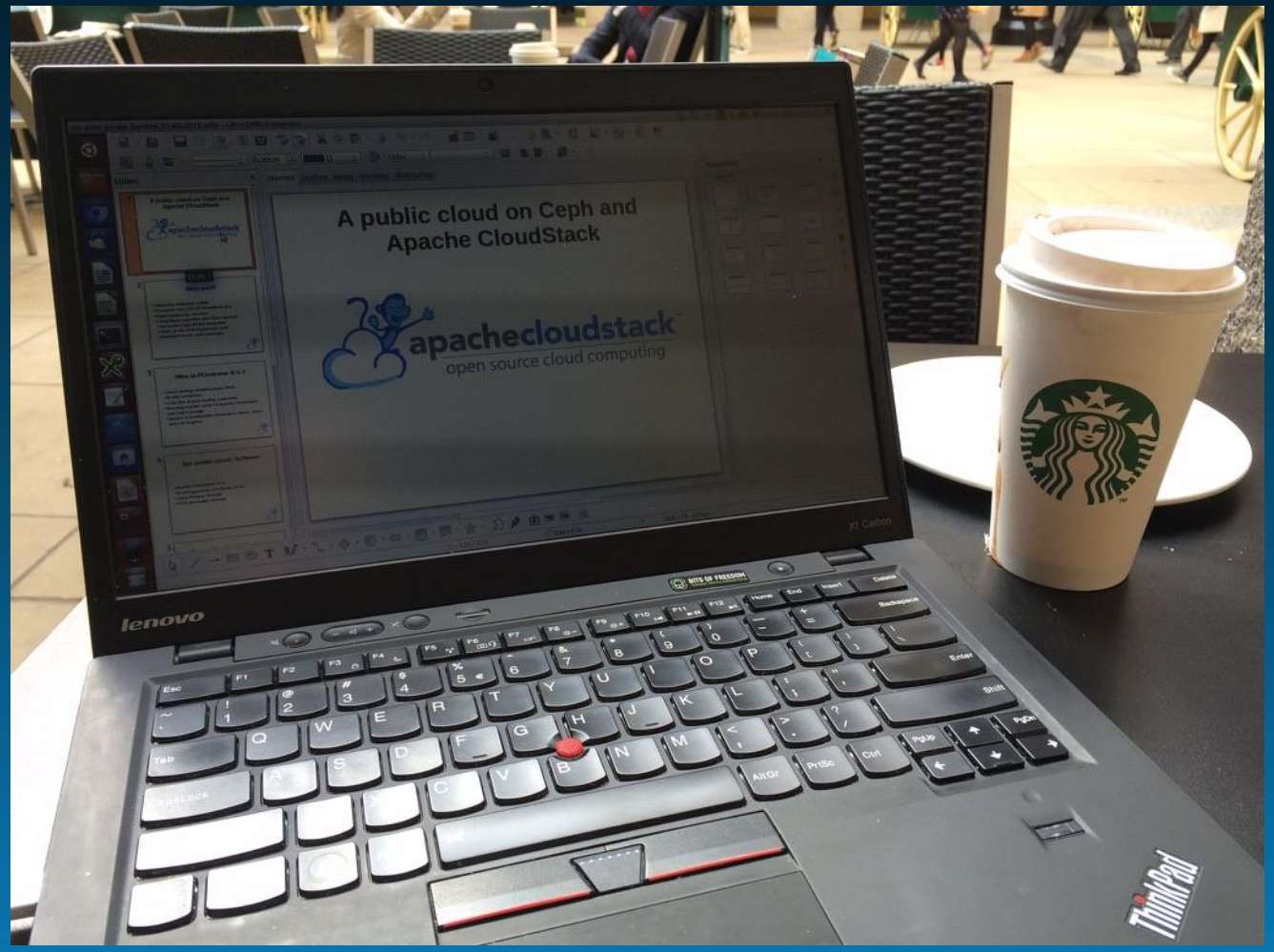
~~10~~ 15 years with CloudStack

~~10~~ 15 years with CloudStack

My girlfriend accused me of cheating because of CloudStack

~~10~~ 15 years with CloudStack

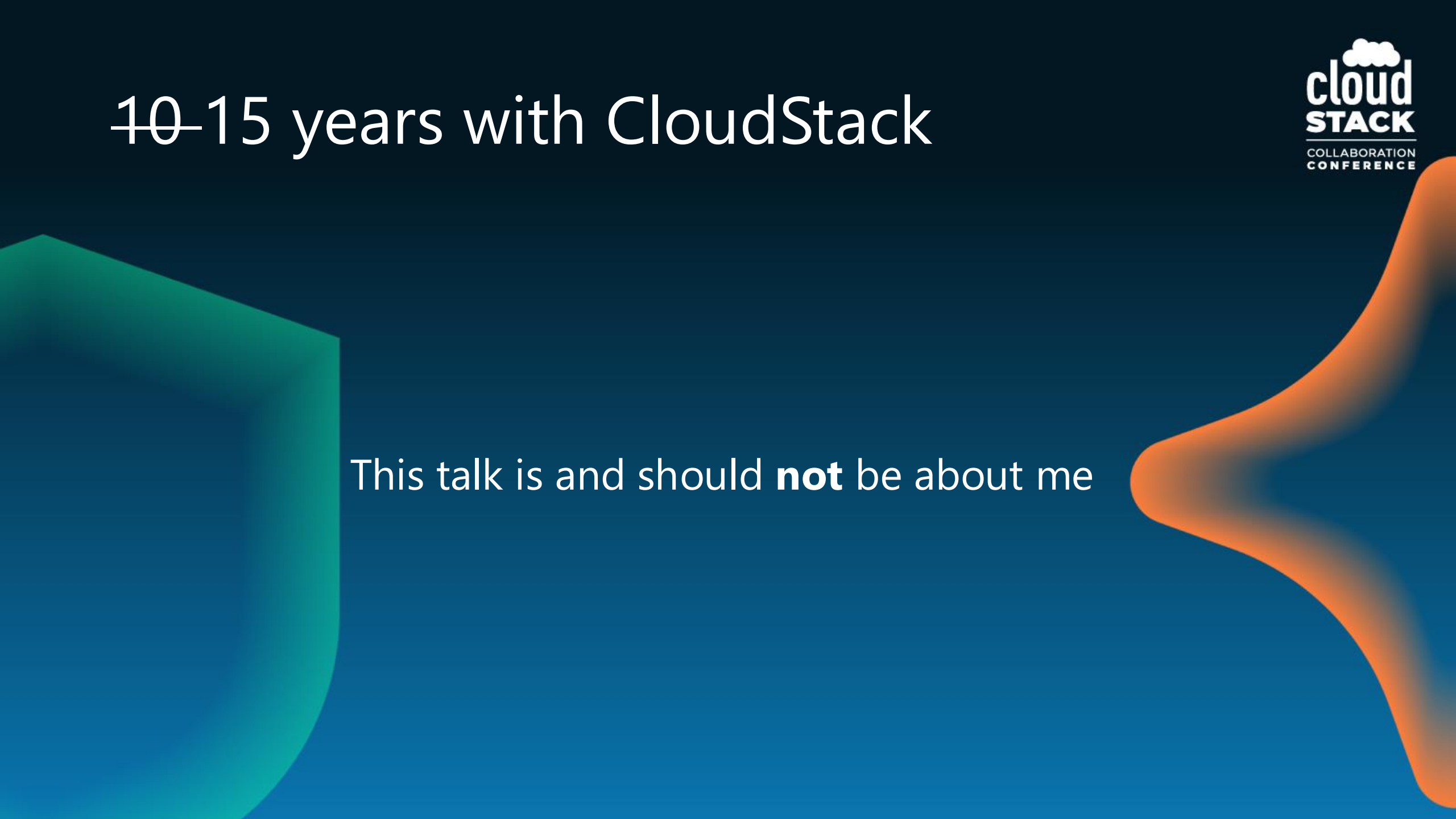
Creating slides in May ***2015***



~~10~~ 15 years with CloudStack

- My code contributions
  - Lot's of work Ubuntu/Debian packages
  - Ceph RBD Primary Storage Pool support
    - Including Libvirt storage pool driver
  - Much of the IPv6 work
    - In Basic and Advanced Networking
  - Improved and battle tested the VXLAN+BGP network design
  - Various other fixes
- My non-code contributions
  - Spreading the word!
  - Speaking at conferences like these
  - Being present on the mailinglist

~~10~~ 15 years with CloudStack



This talk is and should **not** be about me

Nothing is for free

Yes, CloudStack is **free to use**

Nothing is for free

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But that is not the **whole story**

Nothing is for free

Nothing is for free

CloudStack is a **solid foundation**

Nothing is for free

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But foundations require **investments**

Investing in your foundation

- Investing in CloudStack: Time or Money
- Time == Money
- Contribute
  - By spreading the word
  - (Part-time) Allocating a developer
  - Helping with events
  - Helping others on the Mailinglists, Github, Reddit, etc

Investing in your foundation

We do this **together**

Investing in your foundation

Only the sun rises for free

Being called a cheater

- There was a bug in the Virtual Router
  - It was hurting our business
- I was working day and night to fix it
- At 03:00 at night my girlfriend texted me
  - “Do you really expect me to believe you’re still at the office?”
  - “No one’s still working in an office at that hour!”
  - “Are you seeing someone else?”

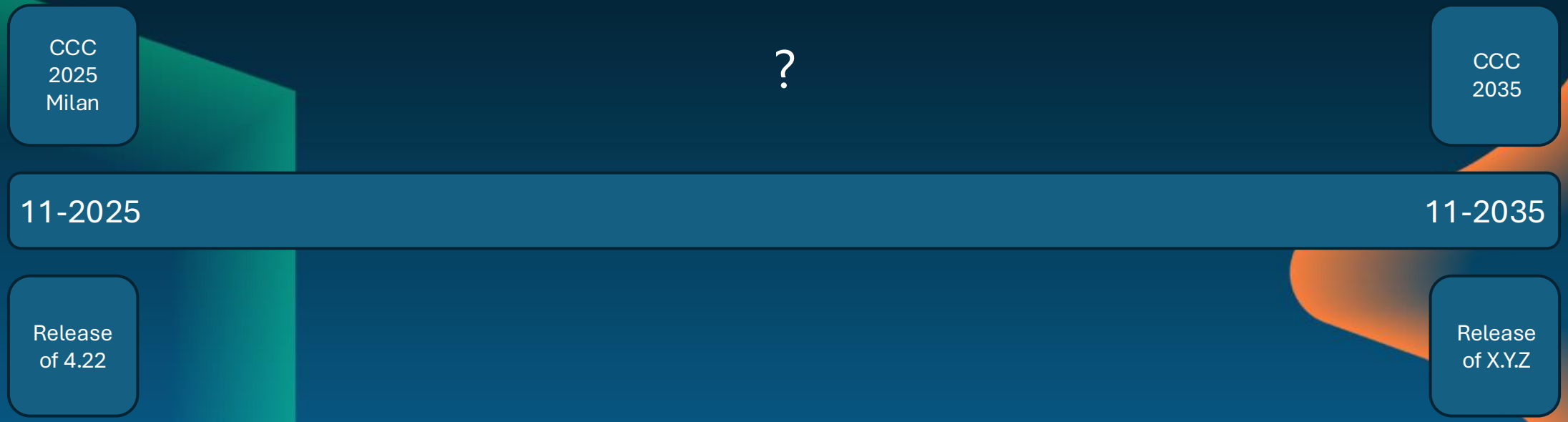
Being called a cheater

We are no longer together

Future

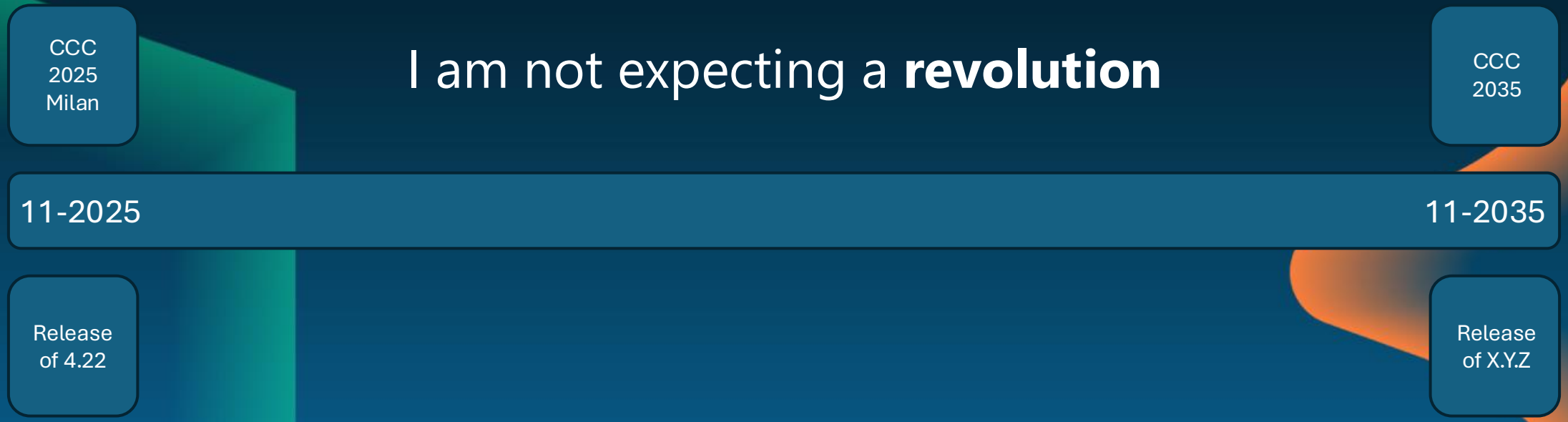
What’s there to come?

CloudStack in 2035



CloudStack in 2035

I am not expecting a **revolution**



CloudStack in 2035

CCC 2025 Milan

I am not expecting a **revolution**

CCC 2035

11-2025 — 11-2035

Release of 4.22

There will be **evolution**

Release of X.Y.Z

CloudStack in 2035

CloudStack is still a **solid foundation**

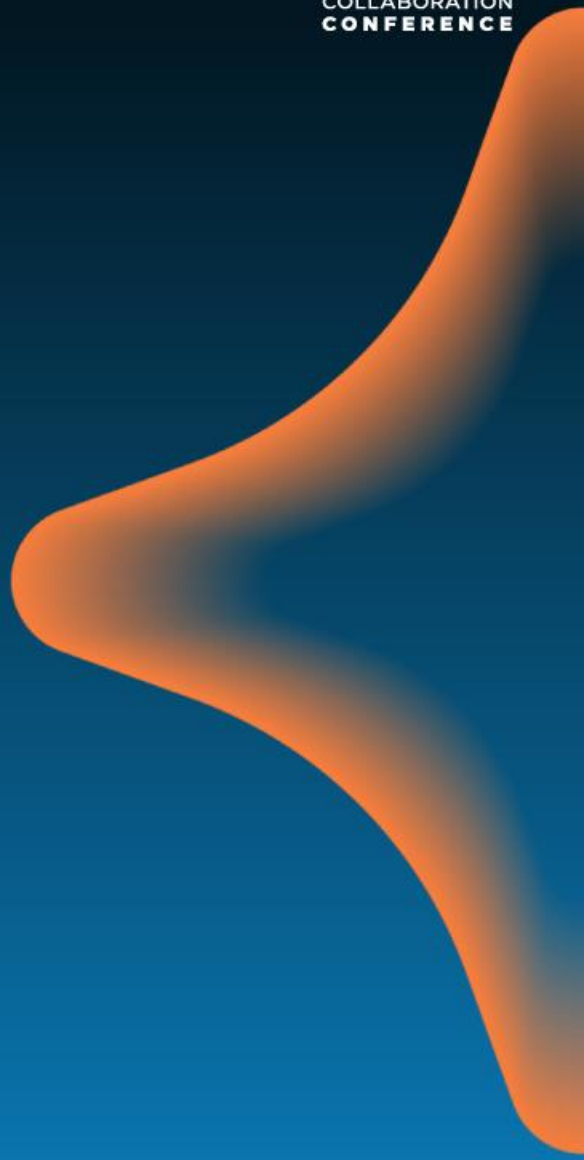
Virtual Machines will still be there

Containers will not take over the world

CloudStack in 2035

CloudStack **just works**

Challanges ahead



Challanges ahead

Users and Developers are aging

Challanges ahead

What's your age?

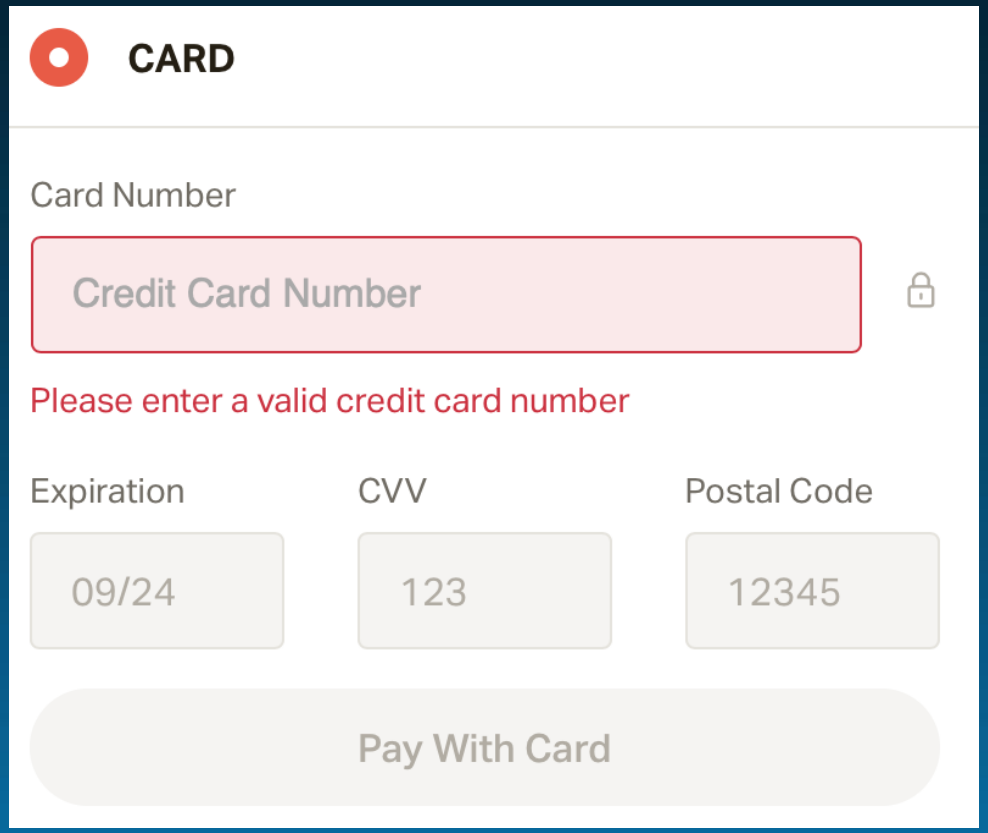
Challanges ahead

This development is not unique to CloudStack

Challanges ahead

Students are being taught how to use public cloud resources

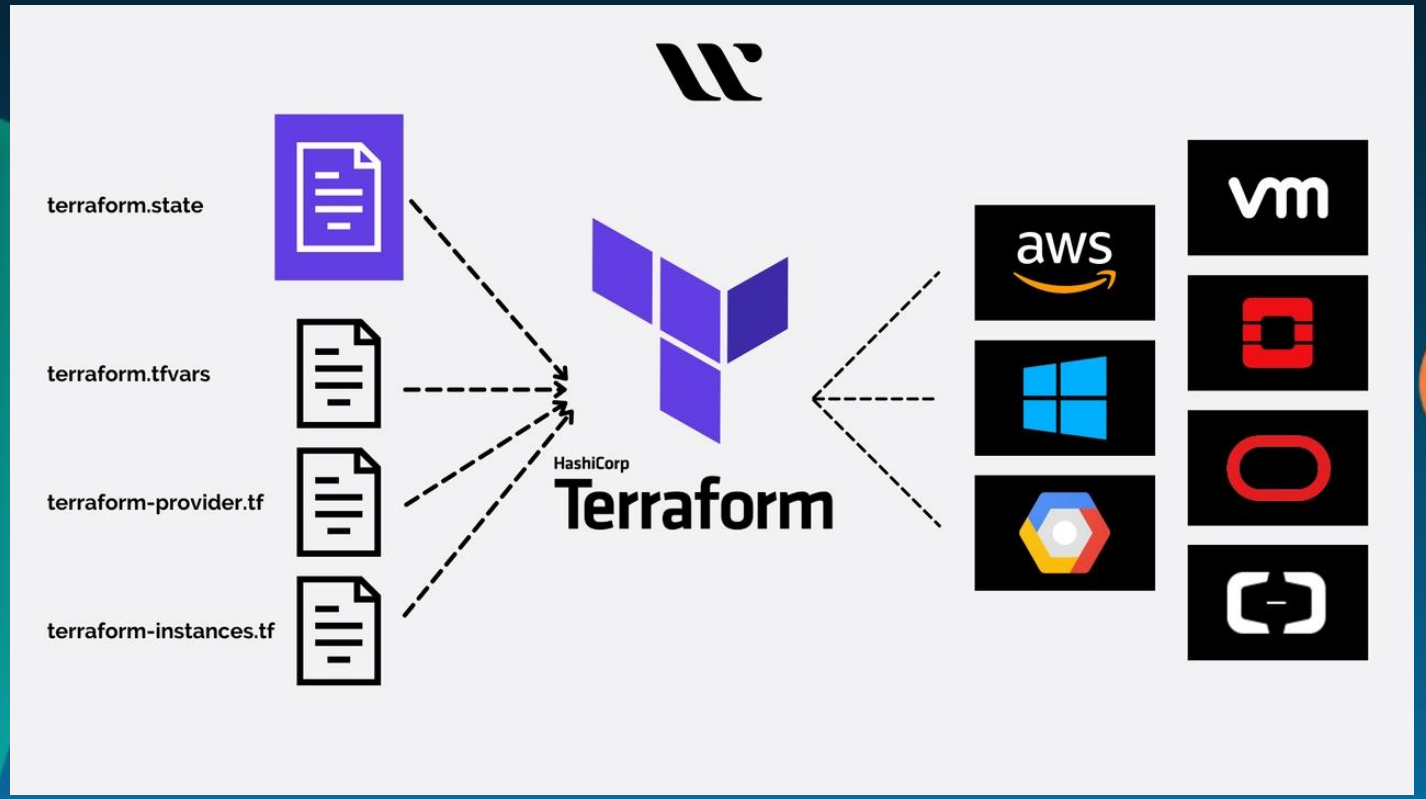
Challanges ahead



Challanges ahead

The essential skills and knowledge to build and run a cloud environment are missing

Challanges ahead



Challanges ahead

We need to attract younger talent

Challanges ahead

They need to learn Linux!

Learn Linux!

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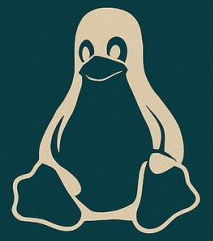
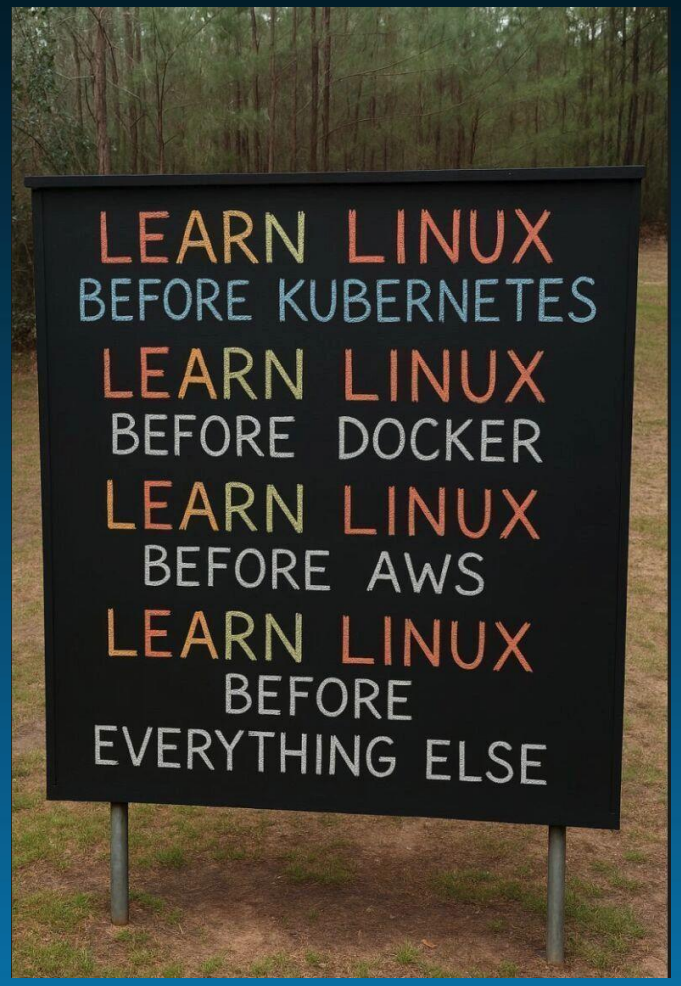
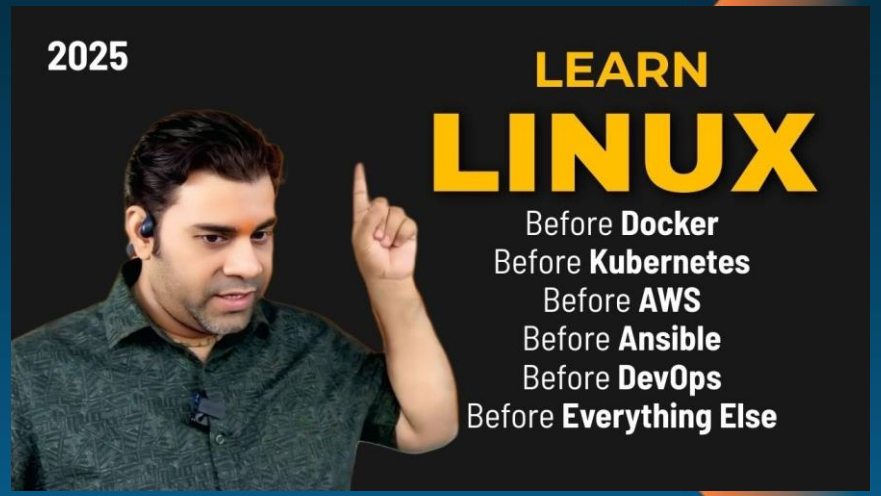
LEARN LINUX FIRST

It makes everything else in DevOps easier



→ Learn Linux before Git
→ Learn Linux before Shell scripting
→ Learn Linux before troubleshooting
→ Learn Linux before AWS
→ Learn Linux before CI/CD
→ Learn Linux before Ansible
→ Learn Linux before Docker
→ Learn Linux before Kubernetes
→ Learn Linux before Terraform





Learn Linux!

I can not stress this enough!

Learn Linux!

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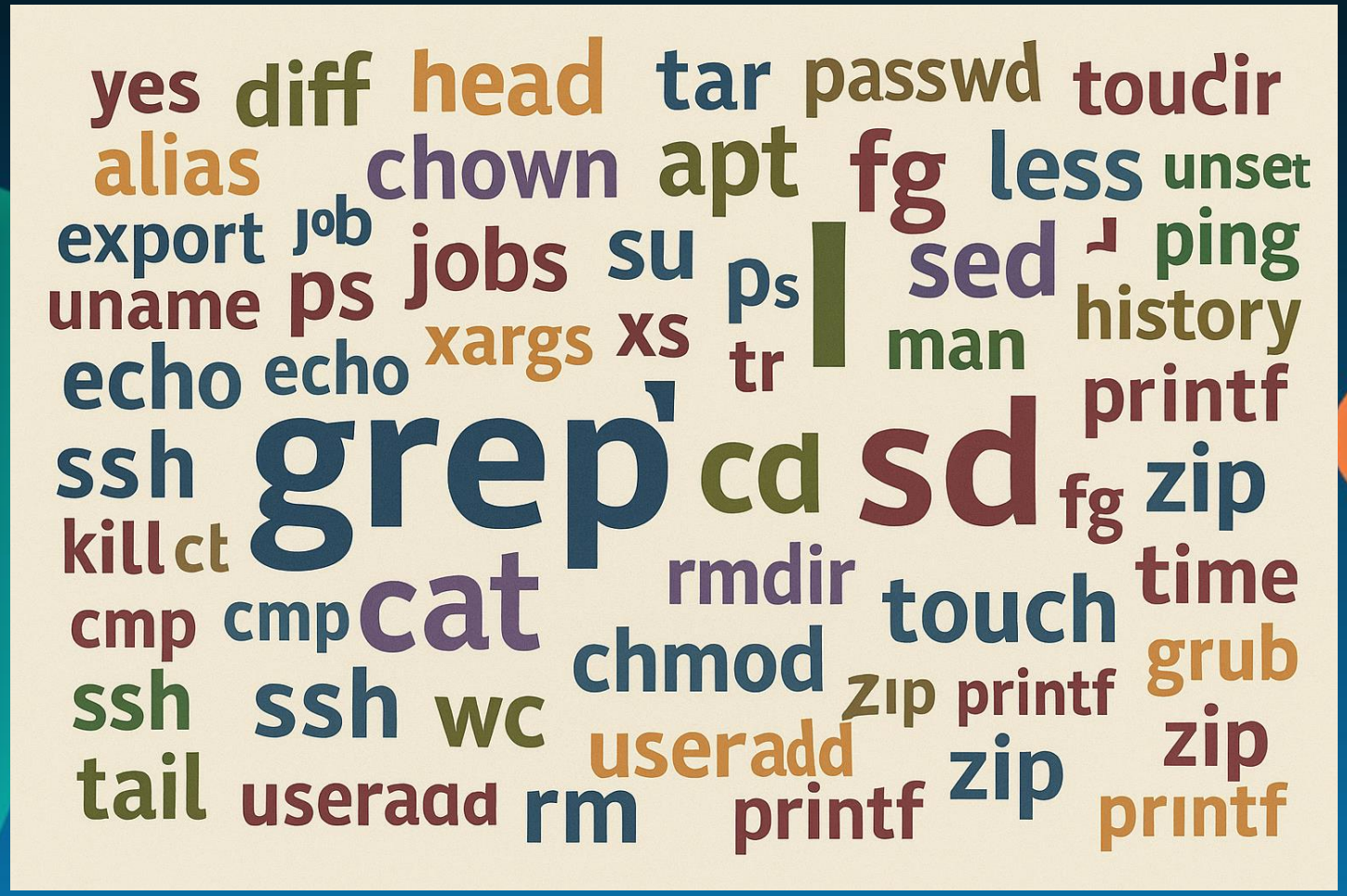
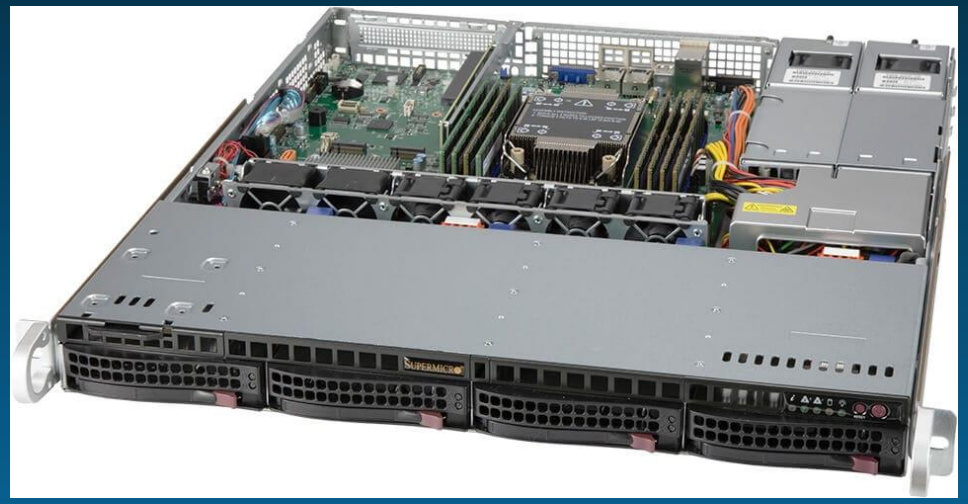
You need to understand the fundamentals

Learn Linux


yes diff head tar passwd touch
alias chown apt fg less unset
export job jobs su ps sed ping
uname ps xargs xs tr man history
echo echo printf
ssh grep cd sd fg zip
kill ct rmdir time
cmp cmp cat touch
chmod grub
ssh ssh wc zip printf
useradd zip
tail useradd rm printf printf

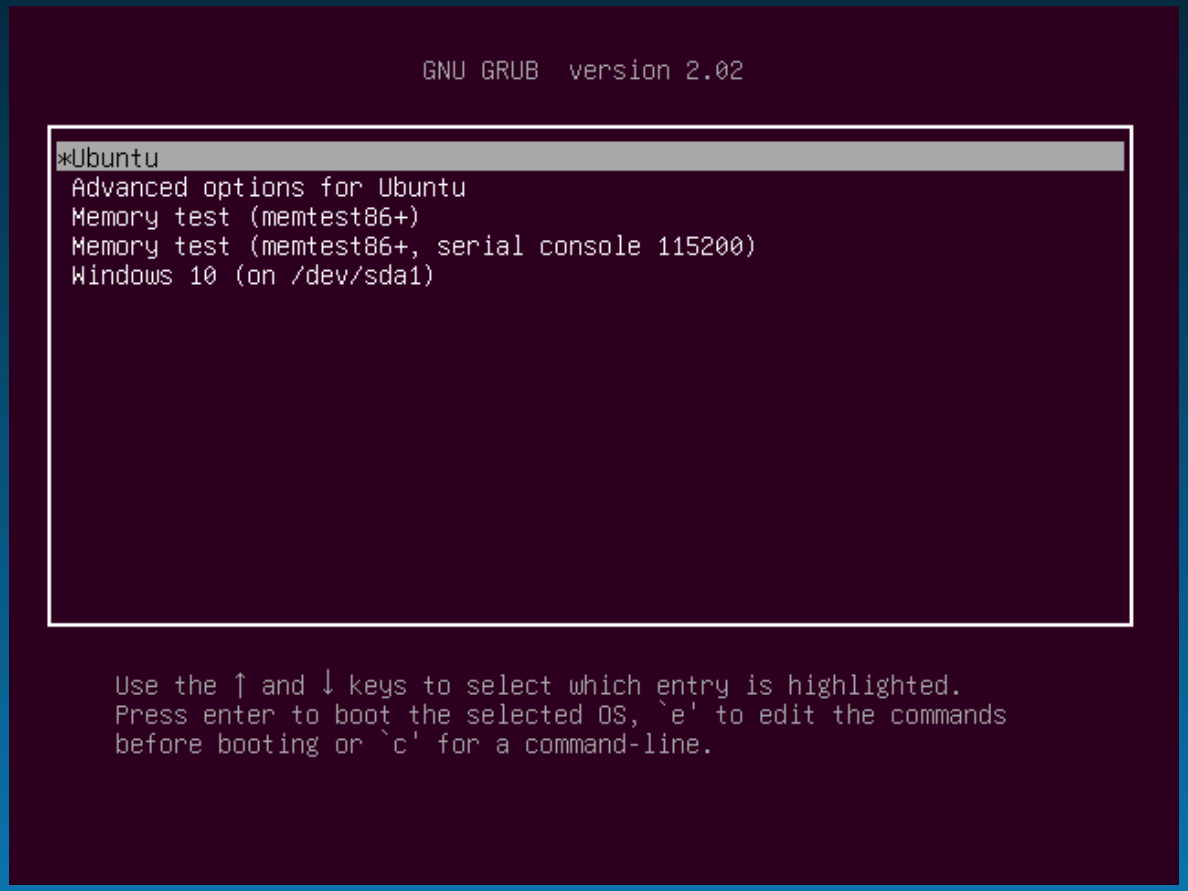
Learn Linux!

Students need to touch bare metal again



Learn Linux!

When was the last time you installed a bootloader?



Learn Networking!

It’s part of your foundation

Learn Networking!

Learn Networking!

Make an HTTP request using Telnet

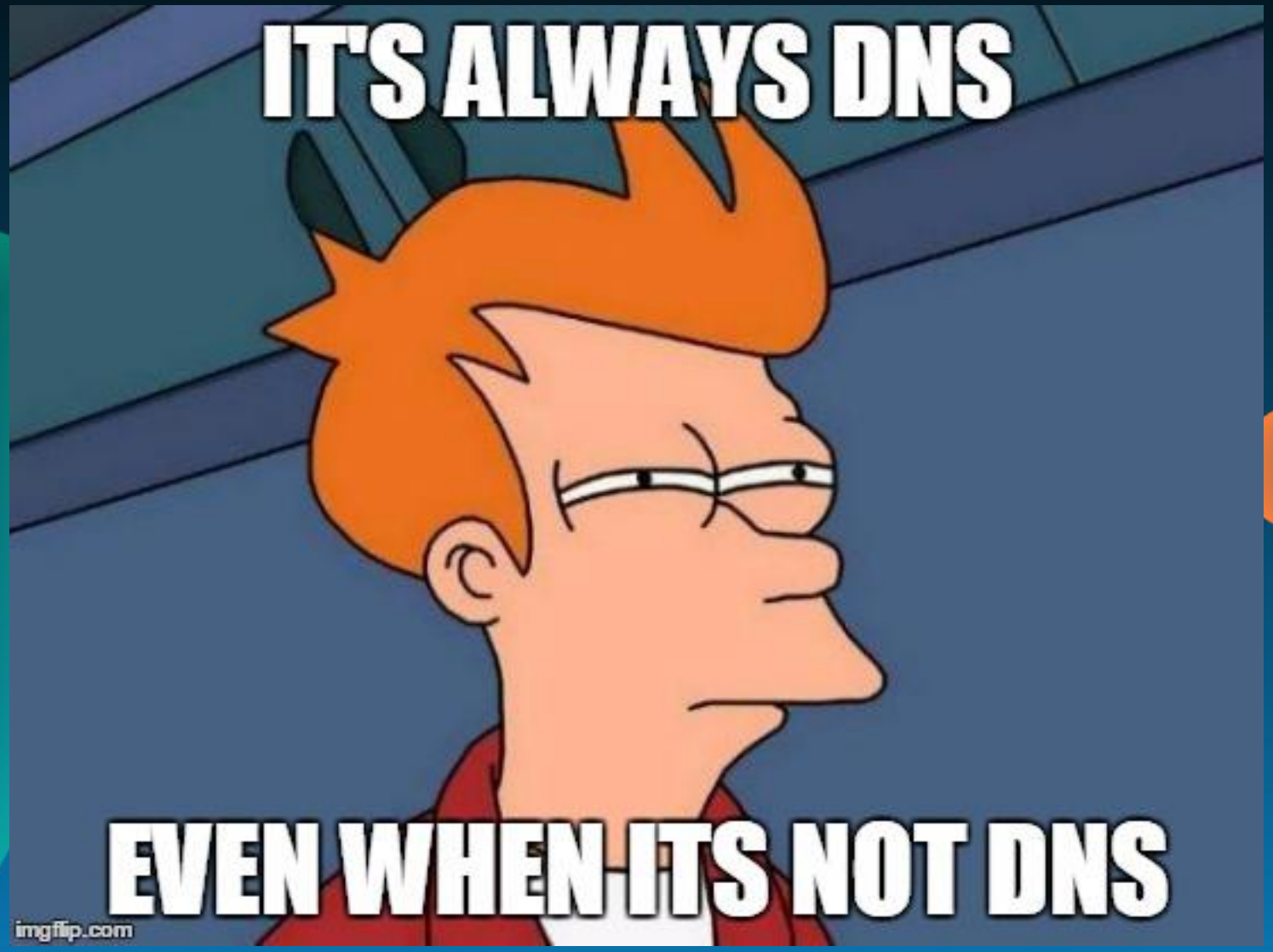
Learn Networking!

Send an email manually via SMTP

Learn Networking!

And remember.....

Learn Networking!



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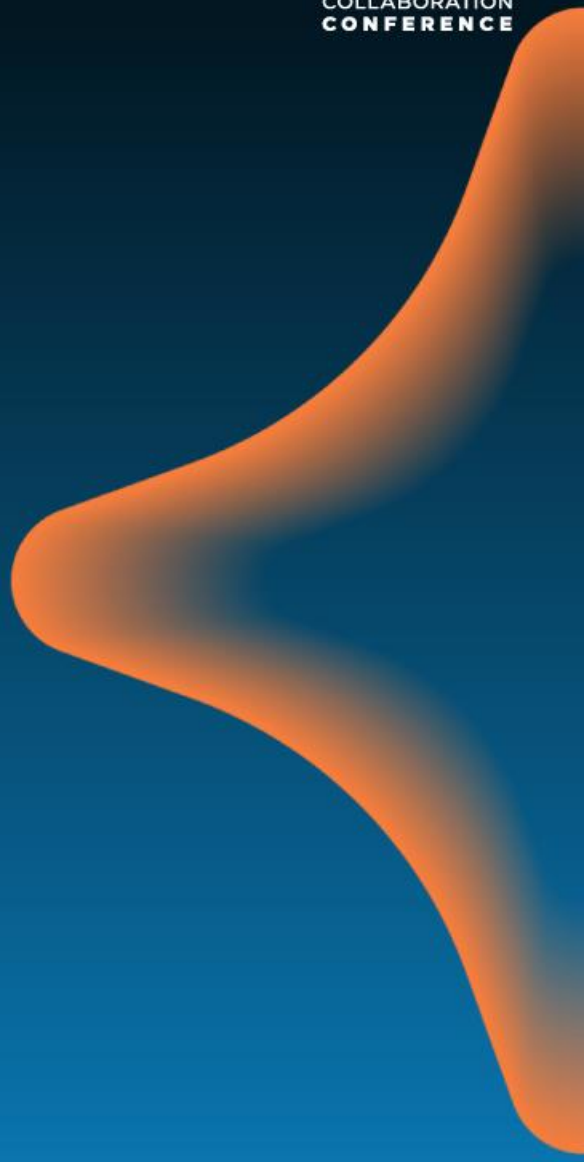
Oppertunities



Oppertunities

Oppertunities

Oppertunities

- Data sovereignty has become a hot-topic in the EU
- CloudStack can play a significant role in the “cloud exit” strategy of many organizations
- We just need to make sure CloudStack keeps working
  - Be boring and reliable

Oppertunities

- We need to do more than just provide VMs
  - But do this very well and ultra smooth

- CloudStack has to integrate and communicate neatly with other tools and platforms
  - Accounting
  - Authorization
  - Billing
  - Logging
  - Monitoring

CloudStack just works

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Fill in the CloudStack User Survey

Help us understand the CloudStack Ecosystem

Thank you!

Wido den Hollander
wido@denhollander.io
https://blog.widodh.nl/