Introducing Incus

System containers and virtual machines at any scale

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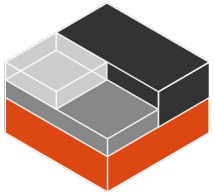


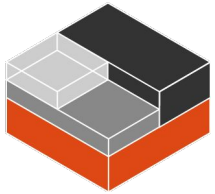
How did we get there?

- 2008/08: The LXC project is created by Daniel Lezcano
- 2013/09: The Linux Containers project, website and image server get created
- 2014/11: The LXD project is announced by Canonical (as part of Linux Containers)

- 2023/07/04: Canonical announces that LXD is to be moved out of Linux Containers
- 2023/07/05: All existing non-Canonical maintainers of LXD are removed from the project
- 2023/07/07: My last day at Canonical
- 2023/08/01: The Incus project is created by Aleksa Sarai
- 2023/08/07: Incus joins Linux Containers, taking LXD's place

- 2023/10/07: Incus 0.1 is released

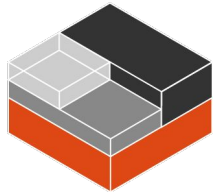
- 2023/12/12: LXD adds a CLA requirement and re-licenses to AGPLv3



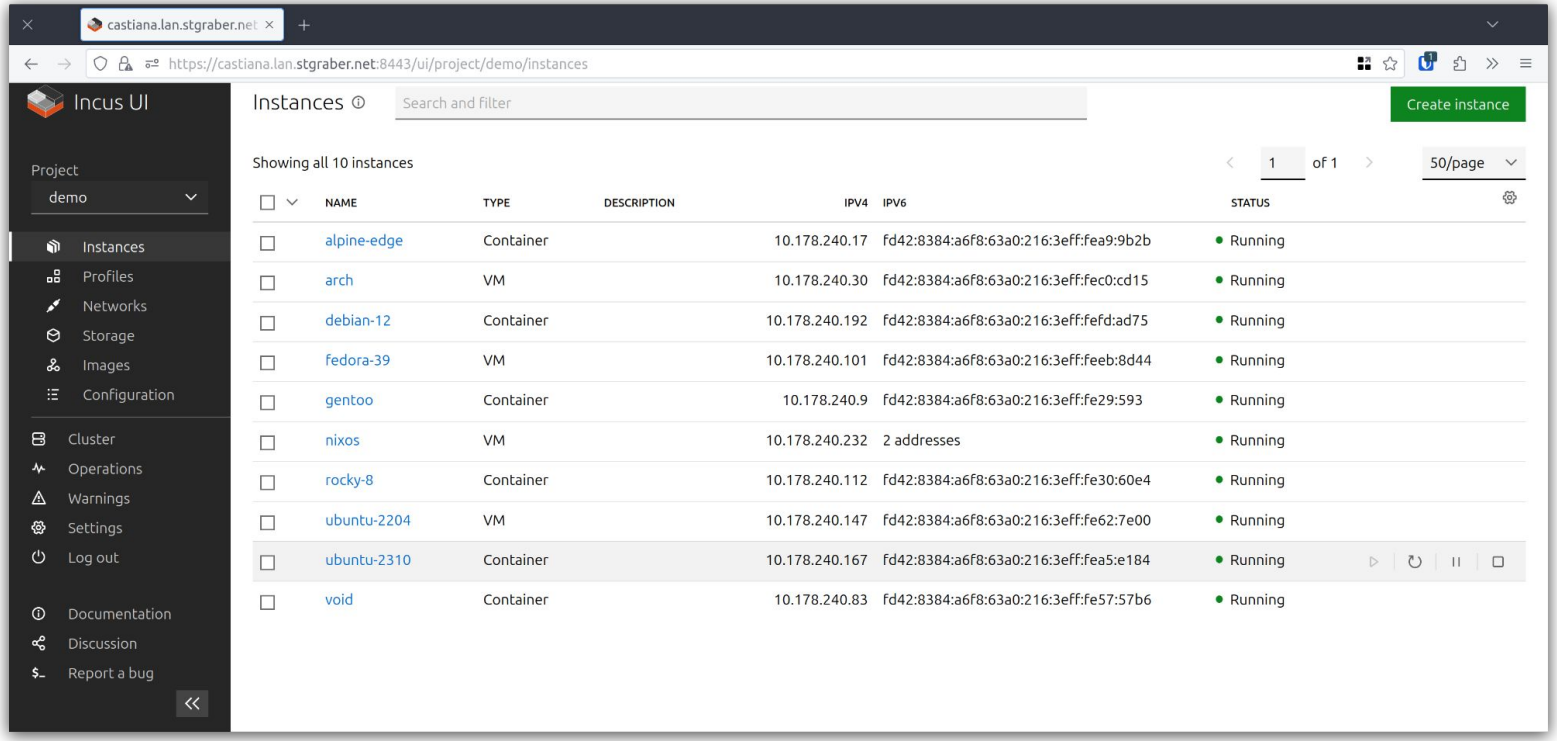
So what is it anyway?

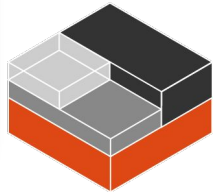
Terminal

```
stgraber@castiana:~$ incus list
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
|    NAME     |  STATE  |          IPV4           |                     IPV6                      |      TYPE       | SNAPSHOTS |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| alpine-edge | RUNNING | 10.178.240.17 (eth0)    | fd42:8384:a6f8:63a0:216:3eff:fea9:9b2b (eth0) | CONTAINER       | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| arch        | RUNNING | 10.178.240.30 (enp5s0)  | fd42:8384:a6f8:63a0:216:3eff:fec0:cd15 (enp5s0) | VIRTUAL-MACHINE | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| debian-12   | RUNNING | 10.178.240.192 (eth0)   | fd42:8384:a6f8:63a0:216:3eff:fefd:ad75 (eth0) | CONTAINER       | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| fedora-39   | RUNNING | 10.178.240.101 (enp5s0) | fd42:8384:a6f8:63a0:216:3eff:feeb:8d44 (enp5s0) | VIRTUAL-MACHINE | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| gentoo      | RUNNING | 10.178.240.9 (eth0)     | fd42:8384:a6f8:63a0:216:3eff:fe29:593 (eth0)  | CONTAINER       | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| nixos       | RUNNING | 10.178.240.232 (enp5s0) | fd42:8384:a6f8:63a0:613d:8e53:eef8:9b74 (enp5s0) | VIRTUAL-MACHINE | 0         |
|             |         |                         | fd42:8384:a6f8:63a0:216:3eff:fe7d:88e5 (enp5s0) |                 |           |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| rocky-8     | RUNNING | 10.178.240.112 (eth0)   | fd42:8384:a6f8:63a0:216:3eff:fe30:60e4 (eth0) | CONTAINER       | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| ubuntu-2204 | RUNNING | 10.178.240.147 (enp5s0) | fd42:8384:a6f8:63a0:216:3eff:fe62:7e00 (enp5s0) | VIRTUAL-MACHINE | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| ubuntu-2310 | RUNNING | 10.178.240.167 (eth0)   | fd42:8384:a6f8:63a0:216:3eff:fea5:e184 (eth0) | CONTAINER       | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
| void        | RUNNING | 10.178.240.83 (eth0)    | fd42:8384:a6f8:63a0:216:3eff:fe57:57b6 (eth0) | CONTAINER       | 0         |
+-------------+---------+-------------------------+-----------------------------------------------+-----------------+-----------+
stgraber@castiana:~$
```



So what is it anyway?





What can I run on there?

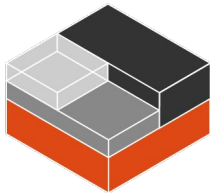
Container or VM

Container

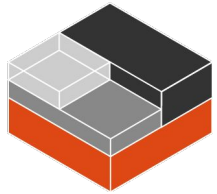
VM

Demo time!

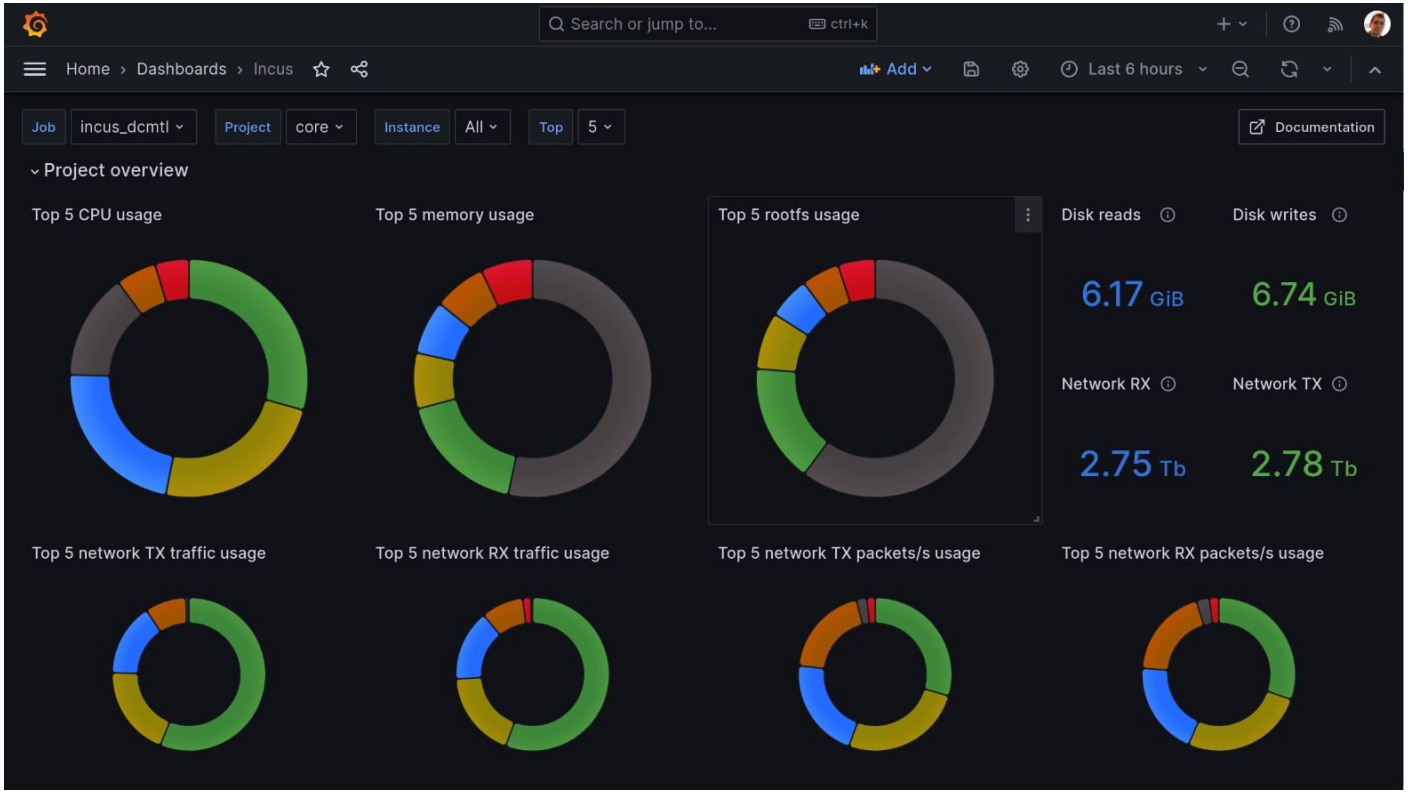
Using Incus on a standalone system

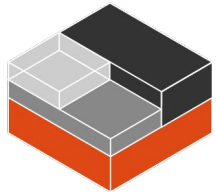


How about scripting it?



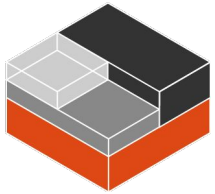
What if I like dashboards?





Demo time!

Using Incus in a clustered environment



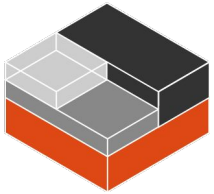
Where do I get it?

debian

Server

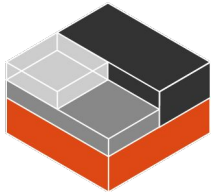
Linux™

Client



What's next?

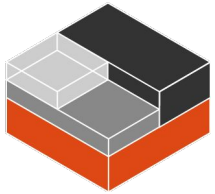
- Availability in more Linux distributions
  - Alpine packaging in progress
  - Fedora native package in progress
- Long Term Support (LTS) release
  - 2 years of bugfixes and minor improvements
  - 5 years of security updates
  - Expected in late March / early April 2024
- Planned major features:
  - bcachefs storage driver
  - Distributed LVM storage driver (lvmlockd)
  - Basic OCI application container support
  - Cross-cluster networking with OVN interconnect



Demo time!

Try it for yourself!

https://linuxcontainers.org/incus/try-it



Questions ?

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