LXD - The container lighter-visor

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LXD: the container lighter-visor

What it **IS**

→ **Simple**
   *Clean command line interface, simple REST API and clear terminology.*

→ **Fast**
   *No virtualization overhead so as fast as bare metal.*

→ **Secure**
   *Safe by default. Combines all available kernel security features.*

→ **Scalable**
   *From a single container on a developer’s laptop to thousands of containers per host in a datacenter.*
LXD: the container lighter-visor

What it **IS**

- nova-compute-lxd
- command line tool
- your own client/script?

LXD REST API

Host A
- LXD
- LXC
- Linux kernel

Host B
- LXD
- LXC
- Linux kernel

Host C
- LXD
- LXC
- Linux kernel

Host D
- LXD
- LXC
- Linux kernel

Host ...
- LXD
- LXC
- Linux kernel
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What it **ISN'T**

→ Another virtualization technology

*LXD tries to offer as similar a user experience as that of a virtual machine but it doesn't itself virtualize anything, you always get access to the real hardware and the real native performance.*

→ A fork of LXC

*LXD uses LXC's API to manage the containers behind the scene.*

→ Another application container manager

*LXD only cares about full system containers and doesn't care about what runs inside the container.*
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LXD in the Enterprise

➔ Integrates with Ubuntu OpenStack
➔ Easy to interface/interact with
➔ Perfect for idle workloads
➔ Direct hardware access
➔ Negligible overhead
➔ Fine grained resource limits
Demo time
LXD: the container hypervisor

What’s coming up next

➔ Improved live migration
➔ Resource usage reporting
➔ Support of all LXD features with OpenStack
➔ Juju support for LXD containers
➔ Support for running Docker inside LXD
LXD: the container hypervisor

Let’s recap

➔ Simple but powerful REST API to manage infrastructure containers
➔ Image based
➔ Trustable containers
➔ Scalable
➔ Designed with developers and enterprise in mind
LXD: the container hypervisor

Contributing

- Written in Go
- Fully translatable
- API client in Go and python
- Apache2 licensed
- No CLA

`git clone git://github.com/lxc/lxd`
Questions?

Try it yourself at: https://linuxcontainers.org/lxd/try-it