Condensing your infrastructure using system containers

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System containers

What are they?

- The oldest type of containers
  *BSD jails, Linux vServer, Solaris Zones, OpenVZ, LXC and LXD.*

- Behave like standalone systems
  *No need for specialized software or custom images.*

- No virtualization overhead
  *They are containers after all.*
System containers

When should you use them?

- Replace your virtual machines
  *Running a Linux VM on a Linux host, use a container instead.*

- Replace physical machines
  *Condensate your infrastructure by moving workloads to containers.*

- For development all the way to production
  *Whenever you need a separate system, just use a container.*
Let’s look at LXD

What it **IS**

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

➔ Fast
   *Optimized storage and image management.*

➔ 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.*
Let’s look at LXD

Daily images

→ Alpine (3.3, 3.4, 3.5, 3.6 and edge)
→ ArchLinux
→ CentOS (6 and 7)
→ Debian (wheezy, jessie, stretch, buster and sid)
→ Fedora (24, 25 and 26)
→ Gentoo
→ OpenSUSE (42.2 and 42.3)
→ Oracle (6 and 7)
→ Plamo (5.x and 6.x)
→ Sabayon
→ Ubuntu (12.04, 14.04, 16.04 LTS, 17.04, 17.10 and Core 16)
Let’s look at LXD

LXD is available on

- Alpine (native)
- Arch Linux (AUR or snap)
- Debian (snap)
- Fedora (COPR or snap)
- Gentoo (native)
- OpenSUSE (snap)
- Ubuntu (native & snap)
Demo time!
System containers and LXD

Let’s recap

➔ System containers are a good alternative to VMs
   *They behave the same but without the overhead.*

➔ Docker containers can be run inside a LXD container
   *So you can deploy specific apps through Docker.*

➔ Distribution images readily available
   *Those are clean images, refreshed daily, behave the same as a stock installation of the distribution.*
Questions?

Try LXD at: https://linuxcontainers.org/lxd/try-it
Stickers are available in front!