Linux Containers (LXC)

Consolidate with Oracle Linux Containers

Linux Containers are available as BETA for Oracle Linux with the Unbreakable Enterprise Kernel only for testing and demonstration purposes.

Linux Containers (LXC) allow running multiple isolated Linux instances (containers) on the same host. A container is a way to isolate a group of processes from the others on a running Linux system. By making use of existing functionality like the Linux kernel's new resource management and resource isolation features (Cgroups and name spaces), these processes can have their own private view of the operating system with its own process ID (PID) space, file system structure and network interfaces.

Containers share the same kernel with anything else that is running on it, but can be constrained to only use a defined amount of resources such as CPU, memory or I/O. By combining containers with other features like the Btrfs file system or the Open vSwitch, it will be possible to quickly set up multiple lightweight isolated Linux instances with their own virtual network segment on a single host.

Features	Benefits
Lightweight and resource-friendly	Enables running multiple instances of an operating system or application on a single host, without inducing overhead on CPU and memory. This saves both rack space and power.
Comprehensive process and resource isolation	Safely and securely run multiple applications on a single system without the risk of them interfering with each other. If security of one container has been compromised, the other containers are unaffected.
Run multiple versions of an operating system on a single server	Since both Oracle Linux 5 and Oracle Linux 6 support the same version of the Unbreakable Enterprise Kernel, Linux containers can be used to consolidate Oracle Linux 5 installations on a single Oracle Linux 6 instance running the Unbreakable Enterprise Kernel
Rapid and Easy deployment	Containers can be useful to quickly set up a “sandbox” environment, e.g. to test a new version of a Linux distribution or to simulate a “clean” environment for testing/QA purposes. When using the Btrfs file system for a container repository, new instances can be cloned and spawned in seconds, without requiring significant additional disk space.