Linux Containers

Overview

cPanel, Inc. supports the use of cPanel & WHM inside of a Linux Container (LXC). An LXC container provides an environment that resembles a standard Linux installation, but does **not** require a separate kernel. For more information about LXC containers, read the Linux Containers documentation.

Run cPanel & WHM inside a Linux Container

To run cPanel & WHM inside an LXC container, we **strongly** recommend that you use the following settings:

Host

We **strongly** recommend that you use Red Hat® Enterprise Linux (RHEL) 7, or CentOS 7 as your LXC host. This configuration ensures the best compatibility with cPanel & WHM. While other Linux distributions may work, they require that the system administrator performs additional steps, which we do **not** support.

Guest

We **strongly** recommend that your LXC containers use CentOS, or RHEL 6 as a guest. A CentOS, or an RHEL 7 installation require additional steps to use it as a guest.

Privileged vs unprivileged containers

cPanel & WHM functions in both privileged and unprivileged containers. We **strongly** recommend that you run cPanel & WHM in a privileged container, because it expects unrestricted access to the system.

The following limitations are inherent to an unprivileged container:

- The host operating system treats the `root` user as a non-`root` user.
- You **cannot** raise the hard limit of a process if you previously lowered it. This action could cause EasyApache 4 to fail.
- Subtle behavior differences may occur.

ProxMox

If you use the Proxmox virtualization software version 4.1 to create a CentOS 6 LXC container inside which to install cPanel & WHM, you may experience the following issues:

- MySQL®-based sites **cannot** connect to the databases. This is because the ProxMox LXC container creates the `/var/lib/mysql/mysql.sock` MySQL socket with insufficient privileges.
- The Dovecot® mail server does not function. This is because the ProxMox LXC container creates the files in the `/var/run/dovecot/login` directory with insufficient privileges.

To correct these issues, perform the following steps:

1. Run the `yum install -y acl` command.
2. Change to the `/var/lib/mysql` directory.
3. Set `777` file permissions to allow the user to create MySQL sockets. To do this, run the following commands:

```
# setfacl -d -m g::rwx .
# setfacl -d -m o::rwx .
```

4. Restart MySQL. To do this, run the `service mysql restart` command.
5. Change to the `/var/run/dovecot/login` directory.
6. Set `777` file permissions to allow the user to create files within the directory. To do this, run the following commands:

```
# setfacl -d -m g::rwx .
# setfacl -d -m o::rwx .
```

7. Restart the Dovecot server. To do this, run the `/usr/local/cpanel/scripts/restartsrv_dovecot` command.

Required changes for CentOS 7 or RHEL 7

You **must** make the following configuration changes to run cPanel & WHM inside an LXC container:

1. After you create the LXC container, change the `lxc.include` line in the `lxc.conf` file to the following line:

```
lxc.include = /usr/share/lxc/config/fedora.common.conf
```

2. Edit the `lxc.conf` file to drop `setfcap` and `setpcap` capabilities. To do this, comment the following lines:

```
# lxc.cap.drop = setpcap
# lxc.cap.drop = setfcap
```

3. If your system uses AppArmor, you **must** uncomment the following line in the `lxc.conf` file:

```
lxc.aa_profile = unconfined
```

Notes:
Some system configurations will **not** run properly with cron inside an LXC container. Individual cron jobs fail to execute even though the cron daemon is active. This issue is a direct result of the incompatibility between the container environment and the `pam_loginuid` module.

To resolve this conflict, disable the `pam_loginuid` module for cron with the following comment in the `/etc/pam.d/crond` directory:

```
#
# The PAM configuration file for the cron daemon
#
#
# No PAM authentication called, auth modules not needed
account   required pam_access.so
account   include  password-auth
#session required pam_loginuid.so
session   include  password-auth
auth   include  password-auth
```

Updates to your cron package may cause the service to reactivate. Inspect this file for changes after each system update.

Additional documentation

- Linux Containers
- Installation Guide - System Requirements
- Enable Quotas on a Virtuozzo VPS
- The sysinfo.config File

Error rendering macro 'contentbylabel' : parameters should not be empty

- Linux Containers
- How to Troubleshoot Jailshell Problems on a Virtuozzo or OpenVZ VPS
- Best Practices for cPanel Virtualization Templates
- Installation Guide - System Requirements
- Enable Quotas on a Virtuozzo VPS

Content by label

There is no content with the specified labels