

Unified CGroups

Problem introduced with change from systemd 241 to 247. Main change is to drop CGroup V1 support and switch by default to unified CGroup V2.

- Previous v241 was built with `-Ddefault-hierarchy=hybrid`
- Current v247 is built with `-Ddefault-hierarchy=unified`

```
$ systemctl --version
systemd 247 (247.3-1~bpo10+1)
+PAM +AUDIT +SELINUX +IMA +APPARMOR +SMACK +SYSVINIT +UTMP +LIBCRYPTSETUP
+GCRYPT +GNUTLS +ACL +XZ +LZ4 +ZSTD +SECCOMP +BLKID +ELFUTILS +KMOD +IDN2 -
IDN +PCRE2 default-hierarchy=unified
```

Lots of issues are reported, and lots of containerization software needs to be upgraded:

- Docker (CGroup V2 supported since v20.10)
- kubernetes
- LXC
- libpam_cgfs cannot be used with pure unified systems

Resources:

- [systemd 233](#)
- [The current adoption status of cgroup v2 in containers](#)
- [Unable to start an unprivileged container on fresh install of Fedora 31](#)
- [Fails to work with cgroupv2 / unified hierarchy #3183](#)

Workaround

Switch systemd to hybrid hierarchy

Add kernel boot commandline argument: `systemd.unified_cgroup_hierarchy=0`

```
echo 'GRUB_CMDLINE_LINUX_DEFAULT="$GRUB_CMDLINE_LINUX_DEFAULT
systemd.unified_cgroup_hierarchy=false"' > /etc/default/grub.d/cgroup.cfg
```

More info:

- **systemd.unified_cgroup_hierarchy**
 - When specified without an argument or with a true argument, enables the usage of unified cgroup hierarchy (a.k.a. cgroups-v2). When specified with a false argument, fall back to hybrid or full legacy cgroup hierarchy. If this option is not specified, the default behaviour is determined during compilation (the `-Ddefault-hierarchy=meson` option). If the kernel does not support unified cgroup hierarchy, the legacy hierarchy will be used even if this option is specified.

Delegate a cgroup in advance

From: <https://linuxcontainers.org/lxc/getting-started/>

Running unprivileged containers as an unprivileged user only works if you delegate a cgroup in advance (the cgroup2 delegation model enforces this restriction, not liblxc). Use the following systemd command to delegate the cgroup:

```
systemd-run --unit=myshell --user --scope -p "Delegate=yes" lxc-start  
<container-name>
```

From:

<https://niziak.spox.org/wiki/> - **niziak.spox.org**

Permanent link:

https://niziak.spox.org/wiki/linux:lxc:issues:unified_cgroups

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