RELOADING SERVICES

Finally, let's look at the reload action. Take this action when you want a service to re-read its configuration without actually doing a full stop and start.

Let's go back to the cups service that we just fixed. The logs generated by cups are written into the /var/log/cups directory. We can see the contents of the directory using the ls command:

```
sudo ls -l /var/log/cups
```

Output:

```
gcpstaging21306_student@linux-instance:~$ ls -l /var/log/cups
total 4
-rw-r----- 1 root adm 848 Aug 17 16:17 access_log
-rw-r----- 1 root adm   0 Aug 17 16:04 error_log
-rw-r----- 1 root adm   0 Aug 17 16:04 page_log
gcpstaging21306_student@linux-instance:~$
```

The error log is empty. That's expected because by default cups will only write warning or error messages into that file. If you want cups to log debug messages into that file, you'll need to change the LogLevel parameter in the configuration file. Let's do that.

Let's edit /etc/cups/cupsd.conf using the nano editor.

```
sudo nano /etc/cups/cupsd.conf
```

In one of the first lines of the file you'll see there's a line that says LogLevel warn. We want to replace **warn** with **debug**:

```
#
# Configuration file for the CUPS scheduler.  See "man cupsd.conf" for a
# complete description of this file.
#

# Log general information in error_log - change "warn" to "debug"
# for troubleshooting...
LogLevel debug
PageLogFormat

# Deactivate CUPS' internal logrotating, as we provide a better one, especially
# LogLevel debug2 gets usable now
MaxLogSize 0
```

Once you've done this, press **"Ctrl-X"** to exit the editor. It will ask you if you want to save your changes, press **"Y"** for yes and then **enter** at the filename prompt.
Once we've done this, we can reload cups:

```
sudo service cups reload
```

Output:

```
gcpstaging21306_student@linux-instance:~$ sudo service cups reload
 * Reloading Common Unix Printing System cupsd
gcpstaging21306_student@linux-instance:~$
```

And once we've done that, we can see that there's now a lot of content in /var/log/cups/error_log.

```
sudo cat /var/log/cups/error_log
```

Output:

```
gcpstaging21306_student@linux-instance:~$ cat /var/log/cups/error_log
I [17/Aug/2018:16:24:44 +0000] Listening to [v1.::1]:631 (IPv6)
I [17/Aug/2018:16:24:44 +0000] Listening to 127.0.0.1:631 (IPv4)
I [17/Aug/2018:16:24:44 +0000] Remote access is disabled.
D [17/Aug/2018:16:24:44 +0000] Added auto ServerAlias linux-instance
I [17/Aug/2018:16:24:44 +0000] Loaded configuration file "/etc/cups/cupsd.conf"
D [17/Aug/2018:16:24:44 +0000] Using keychain "/etc/cups/ssl" for server name "linux-instance".
I [17/Aug/2018:16:24:44 +0000] Configured for up to 100 clients.
I [17/Aug/2018:16:24:44 +0000] Allowing up to 100 client connections per host.
I [17/Aug/2018:16:24:44 +0000] Using policy "default" as the default.
I [17/Aug/2018:16:24:44 +0000] Full reload is required.
I [17/Aug/2018:16:24:44 +0000] Saving job.cache...
I [17/Aug/2018:16:24:44 +0000] Loaded MIME database from "/usr/share/cups/mime" and "/etc/cups": 49 types,
ilters...
I [17/Aug/2018:16:24:44 +0000] Loading job cache file "/var/cache/cups/job.cache"...
D [17/Aug/2018:16:24:44 +0000] cupsdAddSubscription(mask=0, dest=(nil)(), job=(nil)(0), uri="(null)")
D [17/Aug/2018:16:24:44 +0000] cupsdAddSubscription(mask=0, dest=(nil)(), job=(nil)(0), uri="(null)")
I [17/Aug/2018:16:24:44 +0000] Full reload complete.
I [17/Aug/2018:16:24:44 +0000] Listening to /var/run/cups/cups.sock on fd 3...
I [17/Aug/2018:16:24:44 +0000] Listening to [v1.::1]:631 on fd 10...
I [17/Aug/2018:16:24:44 +0000] Listening to 127.0.0.1:631 on fd 11...
I [17/Aug/2018:16:24:44 +0000] Resuming new connection processing...
D [17/Aug/2018:16:24:44 +0000] cupsdSetBusyState: newbusy="Not busy", busy="Not busy"
D [17/Aug/2018:16:24:44 +0000] Notifier dbus started - PID = 7555
D [17/Aug/2018:16:24:44 +0000] cupsdMarkDirty(----S)
D [17/Aug/2018:16:24:44 +0000] cupsdSetBusyState: newbusy="Dirty files", busy="Not busy"
D [17/Aug/2018:16:24:44 +0000] [Notifier] state=3
I [17/Aug/2018:16:24:44 +0000] Expiring subscriptions...
D [17/Aug/2018:16:24:44 +0000] Report: clients=0
D [17/Aug/2018:16:24:44 +0000] Report: jobs=0
D [17/Aug/2018:16:24:44 +0000] Report: jobs-active=0
D [17/Aug/2018:16:24:44 +0000] Report: printers=0
D [17/Aug/2018:16:24:44 +0000] Report: stringpool-string-count=365
D [17/Aug/2018:16:24:44 +0000] Report: stringpool-alloc-bytes=3688
D [17/Aug/2018:16:24:44 +0000] Report: stringpool-total-bytes=4752
D [17/Aug/2018:16:24:44 +0000] [Notifier] Connected to D-BUS
D [17/Aug/2018:16:24:44 +0000] [Notifier] ServerRestarted
I [17/Aug/2018:16:24:45 +0000] Expiring subscriptions...
I [17/Aug/2018:16:25:15 +0000] Saving subscriptions.conf...
D [17/Aug/2018:16:25:15 +0000] cupsdSetBusyState: newbusy="Not busy", busy="Dirty files"
I [17/Aug/2018:16:25:15 +0000] Expiring subscriptions...
gcpstaging21306_student@linux-instance:~$
```

If you check the status of the service, you'll see that it was not restarted (it's been running since we fixed it).

```
sudo service cups status
```

Output:

```
gcpstaging21306_student@linux-instance:~$ sudo service cups status
● cups.service - CUPS Scheduler
   Loaded: loaded (/lib/systemd/system/cups.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2018-08-17 16:17:10 UTC; 9min ago
     Docs: man:cupsd(8)
 Main PID: 7374 (cupsd)
    Tasks: 2
   Memory: 2.5M
      CPU: 18ms
   CGroup: /system.slice/cups.service
           ├─7374 /usr/sbin/cupsd -l
           └─7555 /usr/lib/cups/notifier/dbus dbus://

Aug 17 16:17:10 linux-instance systemd[1]: Started CUPS Scheduler.
gcpstaging21306_student@linux-instance:~$
```

By using the reload action, we caused the service to re-read its configuration without being stopped at any point.

CONCLUSION : You have successfully seen the commands and usage of those commands, this was for reference to you. Hope it helps.