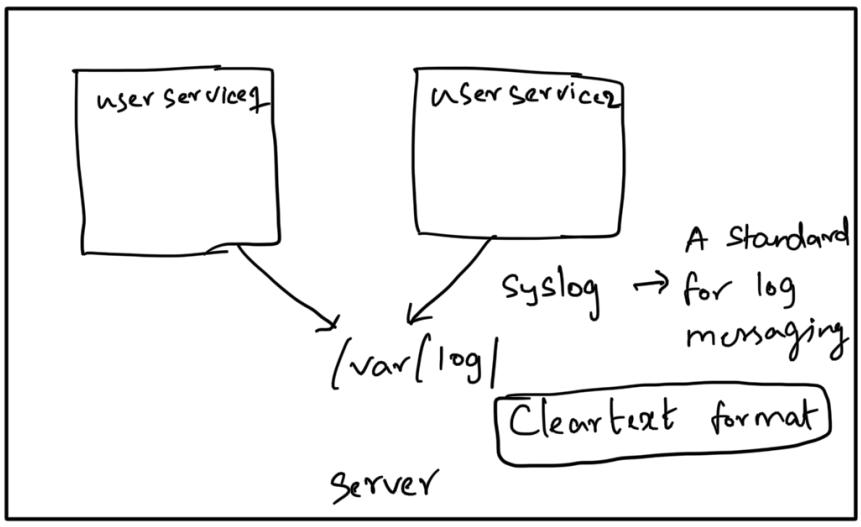
Logging

#evergreen
#journald
#systemd
#syslog
#syslog-ng
#rsyslog

What the heck is syslog?
Is it a process running on server? Is it a binary? I had many questions. It became clear from this wiki https://en.wikipedia.org/wiki/Syslog that syslog is a standard (RFC 5424 ff) and also a C API for logging. Syslog standard is also used to implement rsyslog and syslog-ng (more on that later)
https://askubuntu.com/questions/26237/difference-between-var-log-messages-var-log-syslog-and-var-log-kern-log
So, all the logs from different programs can be sent to a destination on the server which is generally stored in /var/log/



Syslog standard as like any other standard, has its own limitations. One thing is since its text files, parsing and manipulating became a challenge. More on the limitations here https://www.loggly.com/blog/why-journald/

So, what's next to syslog?
journald. It was introduced along with systemd. It has more structure and also uses its own format (not clear text like systemd). Hence we can only view logs journald using journalctl.
journald logs are stored in /var/log/journal (persistent) or /run/log/journal (emphimeral).
https://askubuntu.com/questions/864722/where-is-journalctl-data-stored

Well, if journald is awesome then what is rsyslog or syslog-ng?
rsyslog (a Rock-fast SYStem for LOG processing) and syslog-ng (an enhanced log daemon, supporting a wide range of input and output

methods: syslog, unstructured text, SQL etc) mainly used for central logging. Imagine you have thousands of server and you don't want to hop on each server to read log messages. syslog-ng comes handy there.
https://news.opensuse.org/2018/04/30/syslog-ng-vs-systemds-journald

Logging for a Go program:
https://fabianlee.org/2017/05/21/golang-running-a-go-binary-as-a-systemd-service-on-ubuntu-16-04/
https://serverfault.com/questions/985615/journalctl-and-syslog-how-does-it-actually-work