



Golang and Fedora Project

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Our plans

- Docker – inclusion, further improvements, and actual usage.
- Etcd – further improvements, usage.
- #Golang as a solution for Erlang / systemd issues.

Erlang and systemd

1. 1st service wants epmd.
2. If no epmd available, then service starts it.
3. Everything is supervised with systemd and cgroups.
4. Any other service will re-use epmd started by 1st service.
5. If 1st service stops systemd kills epmd.
6. 2nd service disconnected from epmd.

Epmd implementations

- “Generic” one, from Erlang/OTP package.
- ErIPMD. Written in Erlang just for fun (and for educational purposes).
- Eclus. Written in #Golang.

Generic epmd

- Written in 1980ies-1990ies for VxWorks.
- Written in ANSI C.
- Cannot be expanded easily (low level language).

ErIPMD

- Written in Erlang, and works everywhere where Erlang/OTP is available.
- Easily expandable (high level language).
- Erlang is a thing which is quite isolated from the rest of the system, and it's not easy to seamlessly integrate any Erlang application with the modern Linux system services.

Eclus

- Written in #Golang, and works on every contemporary and actual system (e.g. Linux x86_64).
- Easily expandable (#Golang !).
- Golang maybe the most simple language and “framework” to write apps highly integrated with the modern stack of Linux services (D-Bus, systemd, Avahi, Journald, etc).

Eclus nowadays

- Fully compatible with “generic” epmd.
- Socket-activation (works with systemd).
- D-Bus initial integration (w.i.p., currently only registers, which is enough for systemd-service of “dbus” type).

Eclus in the future

- Integration with Avahi (publication of currently connected Erlang nodes) (w.i.p.)
- Journald integration
- Framework for peeking inside connected Erlang nodes.

GET THE FACTS!

- Go allows fast prototyping and deployment of highly integrated components
- Go reduces ~~total cost of ownership~~ overall complexity of development and deployment, still keeping all the nice features of compilable languages.

Links

- <http://erlang.org/doc/man/epmd.html>
- <https://github.com/lemenkov/erlpmd>
- <https://github.com/goerlang/eclus>
- <https://github.com/coreos/go-systemd>