

Kea

An Open-Source DHCP Server

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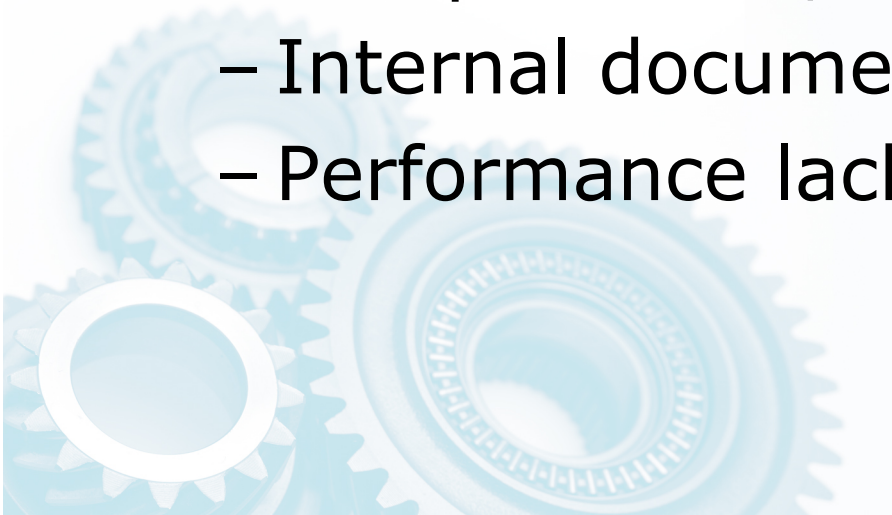
ISC DHCP

- Open-Source
- First version released in 1997
- Default DHCP software in many distributions
- Server/relay/client for IPv4 & IPv6
- Feature-rich



Why DHCP Rewrite?

- Existing code is 17 years old
- Networks have changed
- Hardware has changed
- Drawbacks with ISC DHCP
 - Complex code, difficult to extend
 - Internal documentation lacking
 - Performance lacking



Kea

- Originally part of BIND 10, now being developed as standalone product
- Written in C++
- Currently server is available, client planned
- Addresses issues with ISC DHCP
- Adds own unique features
 - Highly flexible and customizable

Kea Components

***DHCPv4
Server***

***DHCPv6
Server***

***DDNS
Server***

perfdhcp

libdhcp++

- General purpose DHCP library
- IPv4/6 packet parsing and assembly
- IPv4/6 option parsing and assembly
- Interface detection
- Socket management

Server Status

***DHCPv4
Server***

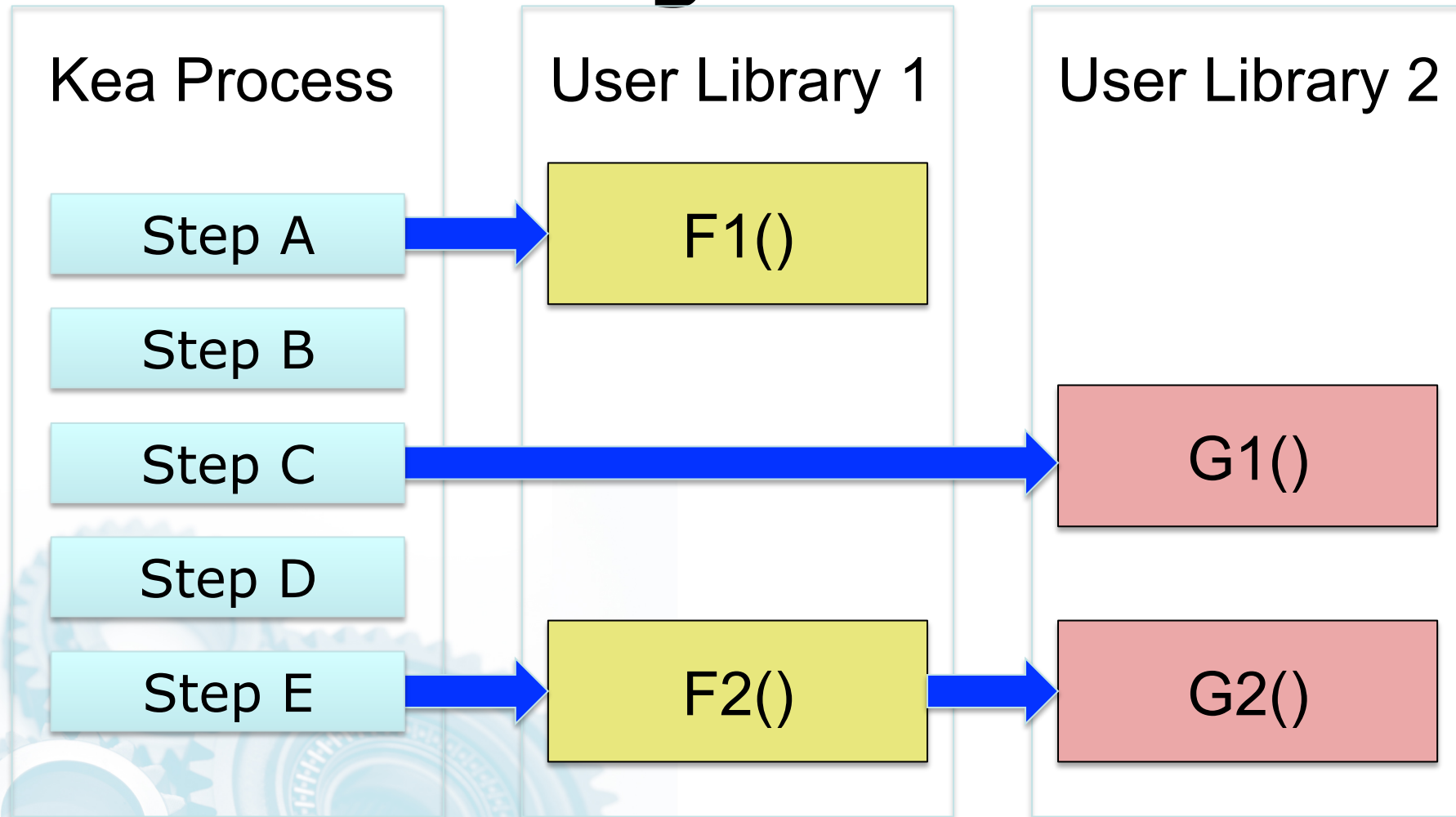
***DHCPv6
Server***

- Address assignment, renewal, rebind, release, expiration
- Dynamic reconfiguration
- Options
 - Standard options
 - Custom options
 - Nested options
 - Option namespaces
- Prefix delegation (DHCPv6 server)

Switchable Lease Storage Back Ends

- ISC DHCP uses lease file
- Kea has choice of lease storage back-ends
 - Memfile – with or without CSV file
 - MySql
 - PostgreSQL
- Adding back-ends is easy – well defined interface

Hooks: Extending the Server



Roadmap (1)

- Kea 0.8

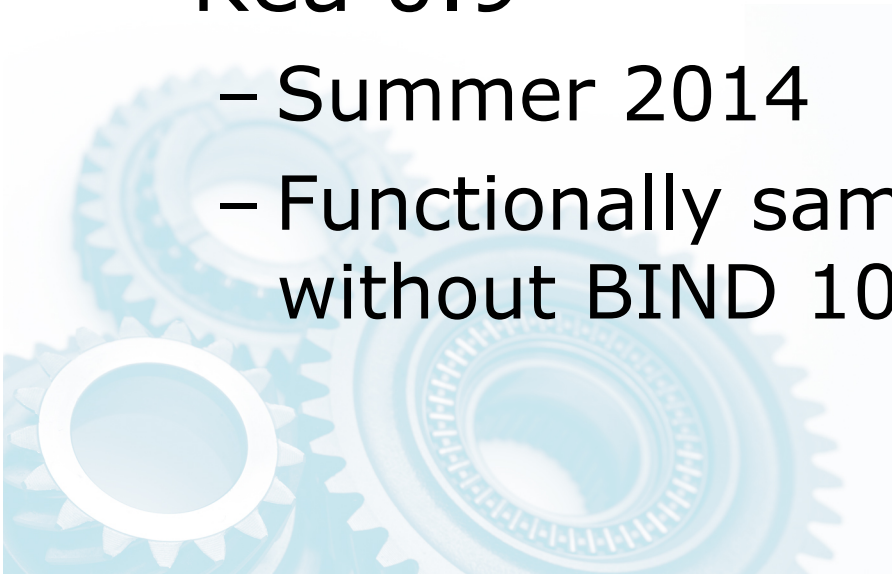
- Available now in BIND 10 1.2

- <ftp://ftp.isc.org/isc/bind10/1.2.0/bind10-1.2.0.tar.gz>

- Kea 0.9

- Summer 2014

- Functionally same as Kea 0.8, but without BIND 10 framework



Roadmap (2)

- Kea 1.0 (Early 2015)
 - Lease expiration processing
 - Host reservation
 - Client classification
 - Fully supported



Beyond Kea 1.0

- Addition of missing protocol features
- ISC DHCP configuration migration
- Failover
- Statistics
- Additional back-ends
- Additional operating systems



Community Contributions

- Kea is Open-Source
 - Code repository is public
 - Bug database public
 - Mailing list public
- Looking for contributions, e.g.
 - Additional back ends
 - Applications via Hooks API
 - Basic GUI



More Information

<http://kea.isc.org>

