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# **Komame Documentation**

*Release 0.1.0*

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Komame provides discovering the network nodes, and generate diagram with [Linkdraw](#).

### 1.1 Motivation

There are a lot of embedded GNU/Linux servers and gadgets in my home network. I have created the network diagram with [sphinxcontrib-nwdiag](#) by hand. This is a very tedious task. I want to generate the diagram and discover the nodes.

### 1.2 About Komame

Komame is my cat name, she is [Chartreux](#). [My gravator image](#) is her face photo. Also Komame is the meaning of frequently in Japanese. My cat Komame is looking around frequently for food in the house. This project has been entangled in such her name.

### 1.3 Features

- Discovery network nodes
- Rendering diagram

### 1.4 Requirements

- Golang  $\geq$  1.2
- [Linkdraw](#)

### 1.5 License

Komame is licensed under GPLv3.





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## Design notes

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## 2.1 Design

### 2.1.1 discovery

- The nodes that are enable to log into shell are enable to have two discovery way. Those are the installing multicast DNS(mDNS) agent and the polling from the discovery daemon. (calls the `agent node`.)
- The nodes that are disable to log into shell have only one discovery way that is the polling from the discovery daemon(calls the `discoverd`. Those nodes are named from MAC address with [MA-L Public Listing](#). (calls the `agentless node`.)
  - This site provides the search form only, but not provide API.
  - The `oui.txt` has been updated daily, the file size is quite large with more than 3.3MB.
  - So we obtain the `oui.txt` once only when `komame` process start, store the data in memory.
  - Polling is ICMP echo request, so you execute as a root permissive.

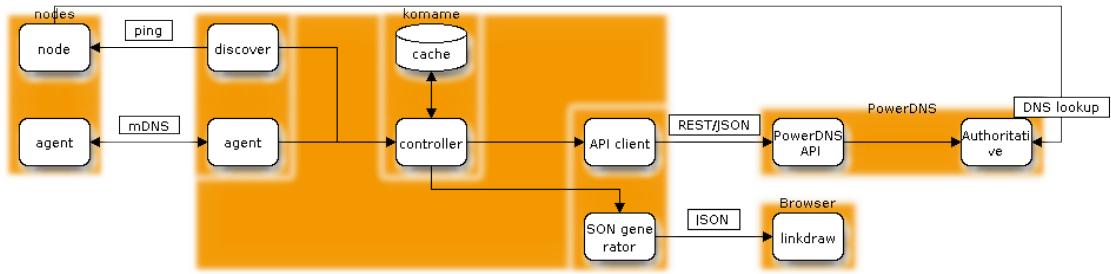
### 2.1.2 DNS

- The agent nodes are enabled to lookup DNS with mDNS agent only.
- The agentless nodes need the authoritative server for the LAN.
- Use the metadata acquired from agent and `discoverd` to [PowerDNS API](#) that is the built-in REST/JSON API of the PowerDNS (authoritative server  $\geq 3.4$ ). \* The searching neighbor networks use traceroute the target address, and

### 2.1.3 Draw diagram

- Drawing the network diagrams from the gathered data, using the [linkdraw](#).
- Generating JSON formatted data from gathered data, see also the [examples of linkdraw](#).

## 2.2 Data flow



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**History**

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**3.1 0.1.0 (2015-0x-0x)**

- First release



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## Indices and tables

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- `genindex`
- `modindex`
- `search`