GNU Make

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Contents

This document describes features and solutions using `gmake', the GNU` make' program. Some solutions may also work with other flavors of `make`, but are usually not tested (by me).

1 Visualize Makefile Dependencies

The first step in understanding whether a Makefile can be parallelized is to view its internal dependencies. This can be done with a tool called `make2graph`. The tool itself also requires a build.

1.1 Building make2graph

Building `make2graph` is simple: install the dependencies like `dot` and `make` and run `make` in the project folder.

```
git clone https://github.com/lindenb/makefile2graph.git
cd makefile2graph
make
```

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This will create the binary tool `make2graph` .

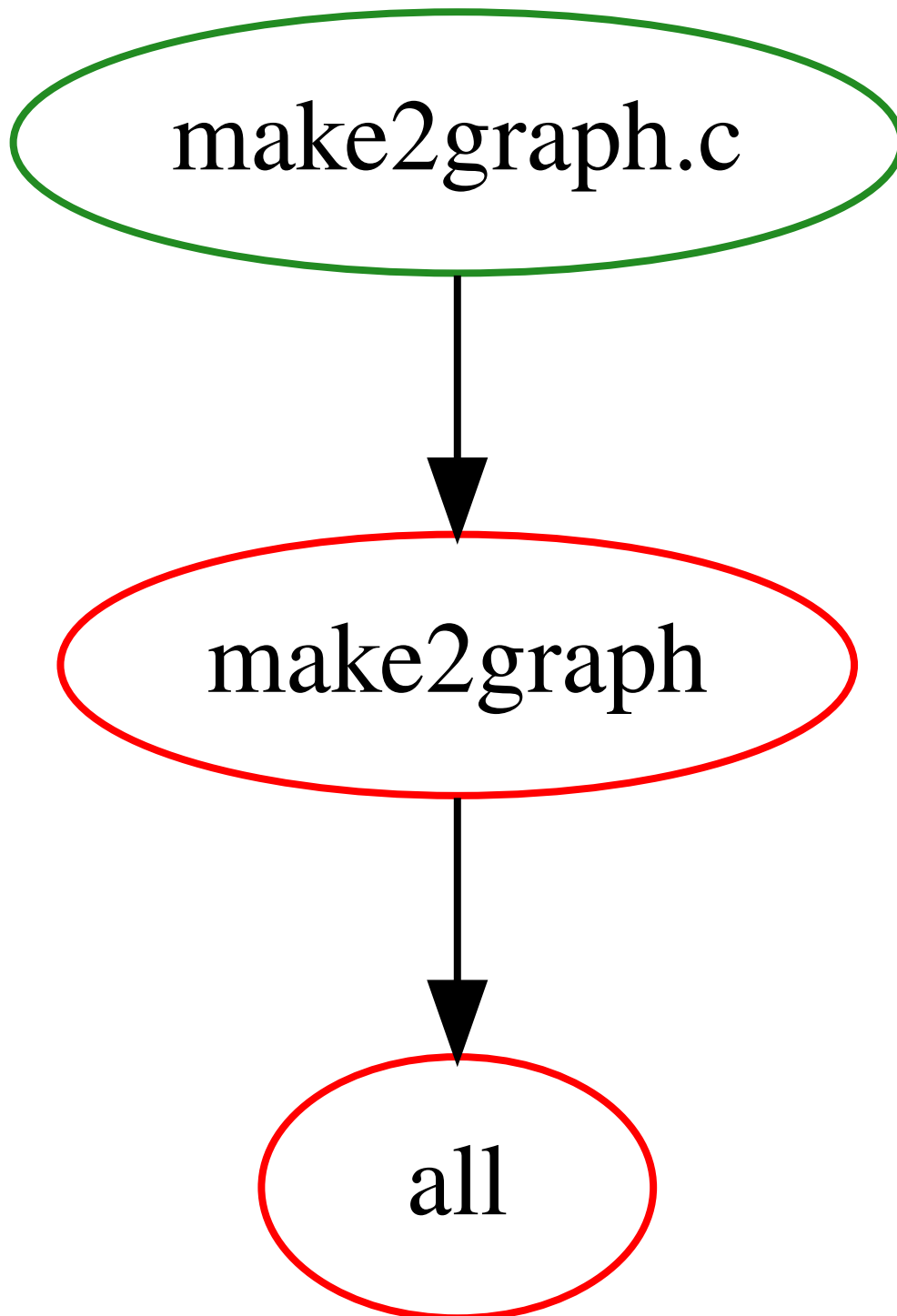## 1.2   Create a Dependency Tree

To view a dependency tree of itself do:

```
make all -Bnd | ./make2graph | dot -Tpng -o make2graph.png
```

This will create the image `make2graph.png` in the local directory. If the complexity of a Makefile is too high for `dot` instead of `.png` , a `.svg` can be created. Also, if the resulting `png` file cannot be viewed with `display` , because the size is to high, another program like `eom` can be used.

```
make all -Bnd | ./make2graph | dot -Tsvg -o make2graph.svg
```

1.3   View the Results

2   History

Version	Date	Notes
0.1.0	2023-03-02	Initial release

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