

# bcc Hacking Stuff

## Map in Map Issue

<https://github.com/iovisor/bcc/issues/1318>

### The Basics

- we need a file descriptor to an inner template map
  - bcc already supports BPF\_PINNED\_MAP
  - maybe this could be useful?
- possibly should have a way to *free* the template map after it is created

### Main Problems

- best way to handle creation of template map?
  - probably want to reuse some existing macro here (maybe BPF\_TABLE)
- how to lookup file descriptor by name?
  - palmtenor said this was easy but then he dropped off the face of the earth without explaining
- how to fix potential rewriter problems?
  - some of the diffs below might be helpful
  - `src/cc/frontends/clang/b_frontend_action.cc`
- what is the best workflow for testing here?

### Creation Flow

1. define inner map
2. lookup inner map fd by name
3. define outer map using attributes of inner map
4. maybe free inner map fd

### Important Files

- `src/python/bcc/table.py`
  - python objects to refer to BPF tables
  - already defines ID for `hash_of_maps`
  - still need to write the class
- `src/cc/export/helpers.h`
  - define helper macros for BPF programs
  - need to add macros for `HASH_OF_MAPS` here
- `src/cc/frontends/clang/b_frontend_action.cc`
  - rewriter stuff (see palmtenor's issue above)
- maybe more

### Some Diffs That Might Be Useful

- add btf support for maps
- add support for devmap (this seems to be cc API exclusive but could still be useful)
- add lru hash and lru per cpu hash
- add devmap and cpumap (**this is probably the most helpful so far**)