

NFD Management Thread

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Problem and Solutions

- Management is slow → Move it to a new thread
- Simple approach to concurrency → Use a spinlock
- Merge existing RIB thread with new, generic management thread
- Improve inter-thread communication to avoid encoding & sockets

What We Did

- Moved management into a separate thread
 - Refactored functions to support increased multithreading in the future
- Add locks to secure data structures
 - Usage in forwarding pipeline, managers
- “Implement” in-memory Face
 - Not necessary due to structure of new threading approach

What We Did Not Do & Problems

- Merge RIB thread with new management thread
 - Time constraints with refactoring RIB to use new threading approach
- Fix the event scheduler
 - Currently dependent on old paradigm of one `io_service` == one thread
- Test