OSP multiple modify requests to MDT

- **LU-6864** “Support multiple modify RPCs in flight for MDT-MDT connection”
  - gerrit patch 14375 “osp: manage number of modify RPCs in flight”

- Implementation
  - use the same client_obd fields than for MDC
  - call obd_get_mod_rpc_slot() / obd_put_mod_rpc_slot()
  - OSP max_mod_rpcs_in_flight parameter
  - OSP modify rpc_stats statistics

- How to identify modify vs. non-modify OSP requests?
  - currently if transaction needs sync commit (th_sync) or wait to submit (th_wait_submit) then no rpc_lock
    - else take rpc lock but no max_rpcs_flight control (obd_get_request_slot())
  - opcode is always OUT_UPDATE
OSP multiple modify requests to MDT (2)

- Cross MDT modify requests
  - remote directory operations
    - creation
    - unlink
    - any other?
  - namespace LFSCK operations
    - mostly non-modify requests
    - how to test it?

```
lfs mkdir -i1 dir0/dir1a
lfs mkdir -i1 dir0/dir1b
lfs mkdir -i1 dir0/dir1c
lfs mkdir -i1 dir0/dir1d
...```

Client ➔ MDT0 OSP ➔ MDT1
OSC or OSP multiple modify requests to OST

Following information come from discussions that occurred during LU-5319 development. It needs to be confirmed.

- LAST_RCVD is currently not used for OSTs
  - performance more important than correctness of data

- OSC modify operations are not all idempotent
  - lockless IO
  - attribute set

- OSP requests for layout LFSCK