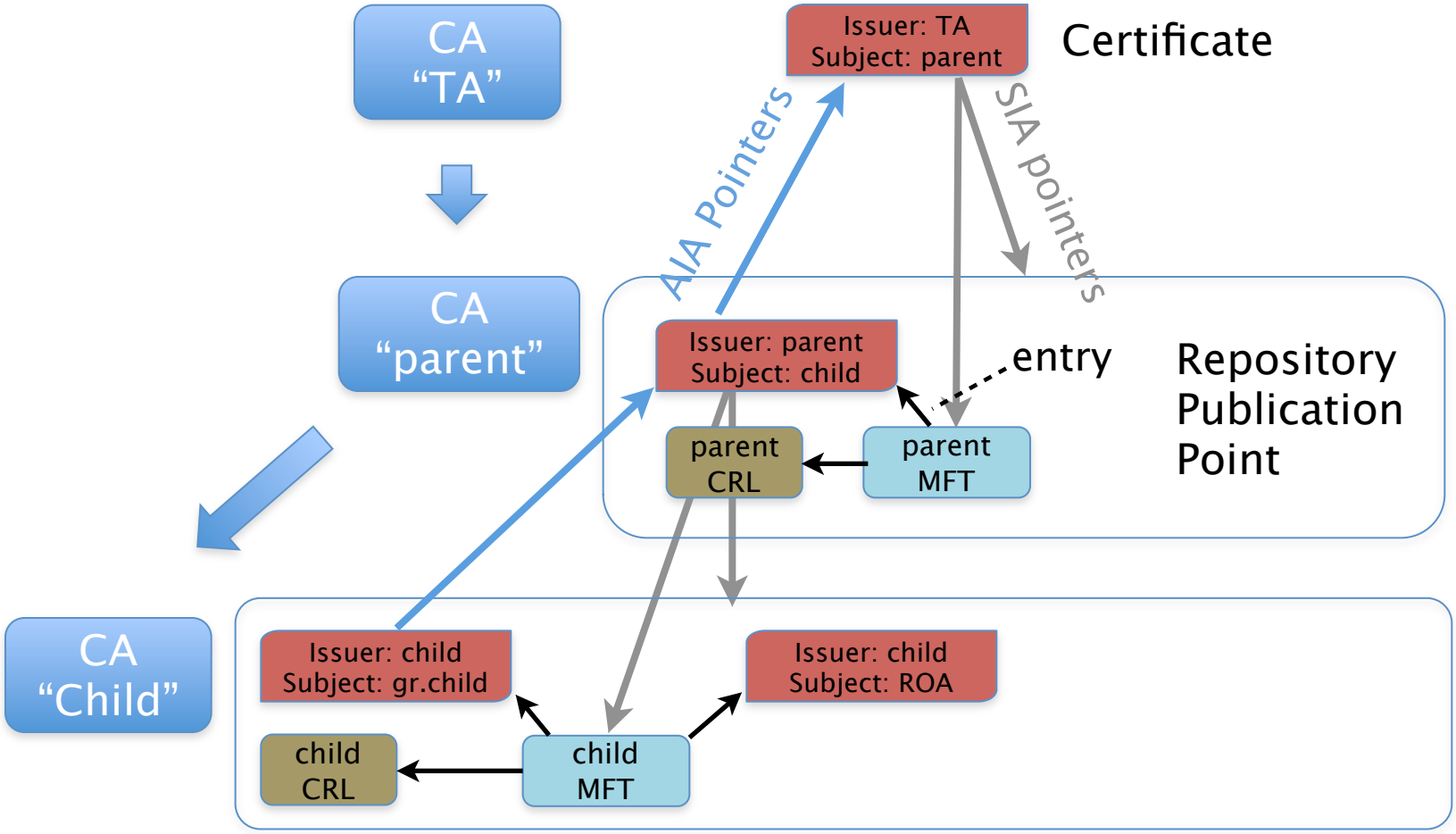
# Key rollover @RIPE NCC

draft-ietf-sidr-res-certs-18#section-8

draft-huston-sidr-keyroll-00.txt

# Before rollover



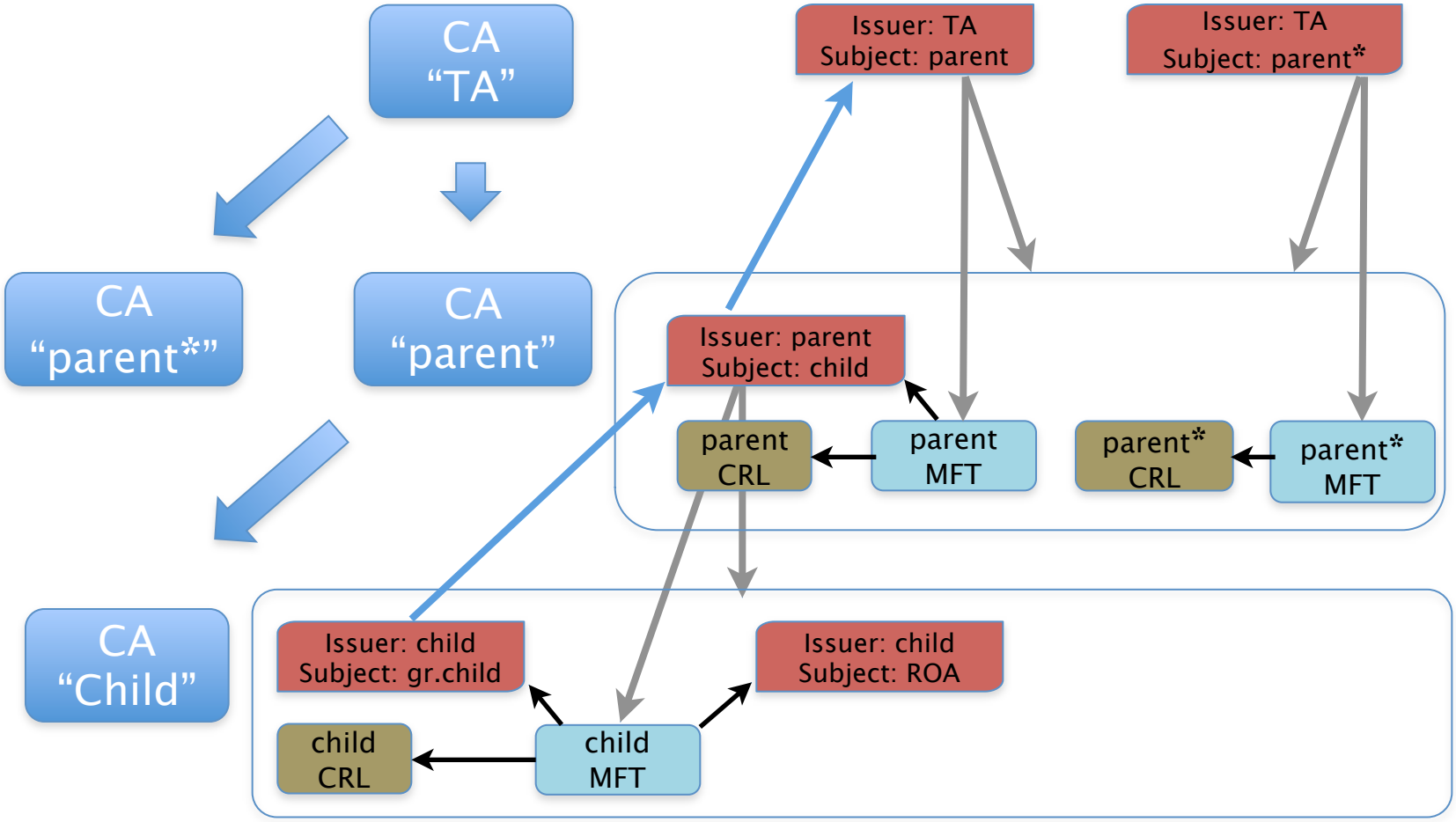
# Phase 1 - Request new certificate

1. Generate *new* key
2. Generate certificate request
3. Request parent to issue and publish new certificate

   Publish manifest and CRL for new certificate (empty)
4. Wait for *staging period*

   ➡ *Not implemented*

# After phase 1
## new certificate published



# Phase 2 - Activate new certificate

5 a) Suspend request processing

b) Mark *current* CA *old*, and *new* CA *pending*

6 Re-issue all subordinate certificates using the *pending* CA

7 Re-issue subordinate signed objects using the *pending* CA (except for manifests)

# Phase 2 - Activate new certificate

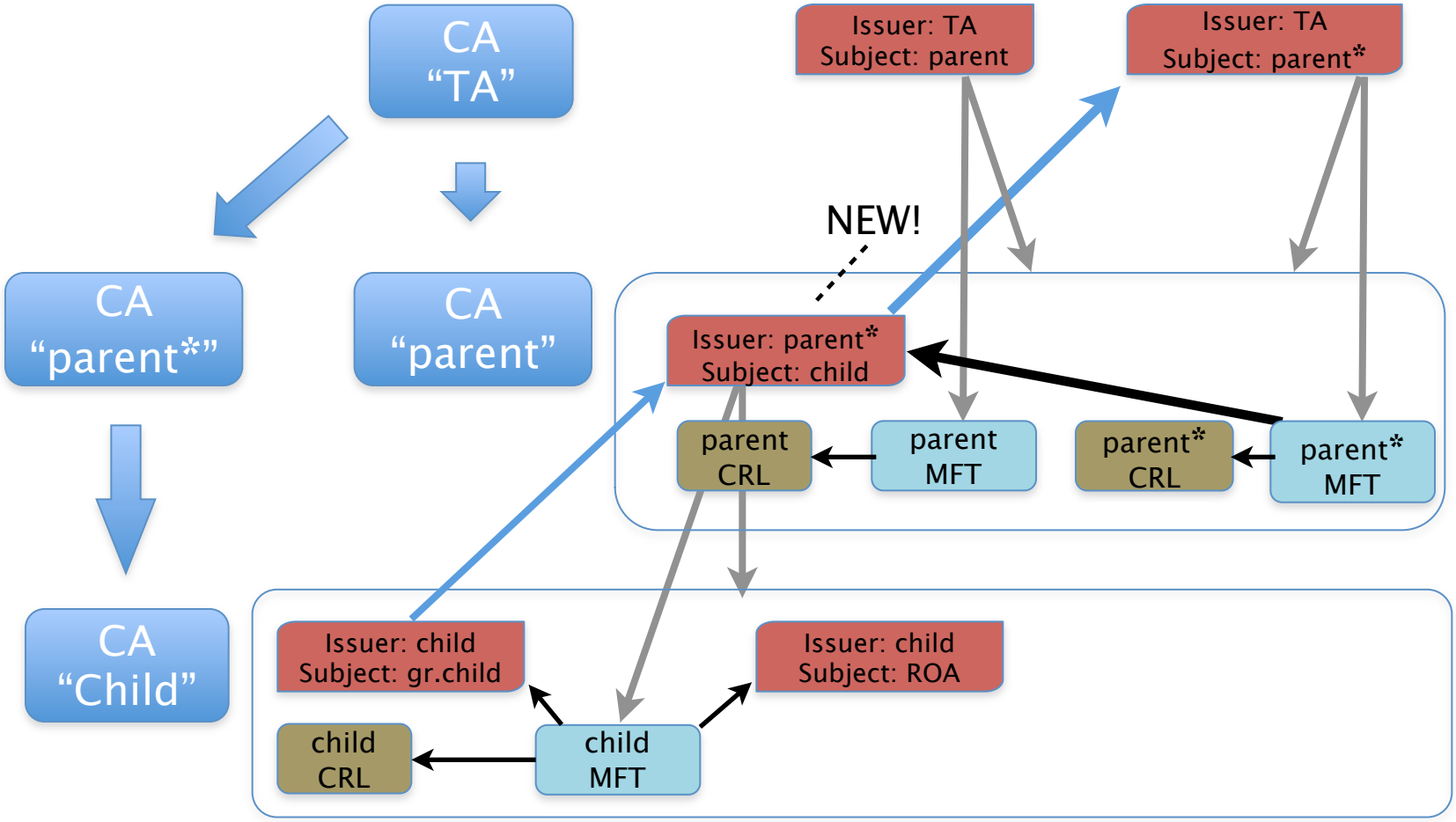
8 Re-issue manifest for *old* CA

➡ CRL is the only remaining entry

9 a) Mark *pending* CA *current*

b) Resume processing requests

# After phase 2
## new certificate activated



# Phase 2

```
$ rsync --list-only rsync://certrepo.ripe.net/rta
    CN=RTA,O=RIPE%20NCC,C=NL.cer
    CN=RTA,O=RIPE%20NCC,C=NL.crl
    CN=RTA,O=RIPE%20NCC,C=NL.mnf
    CN=dkH6Hh8BYnfyVZoYaO2FcAXyn9Q.cer
    CN=EQPBzzm03_gZdrqO6tOS7eHjyXY.cer
```

# Phase 2

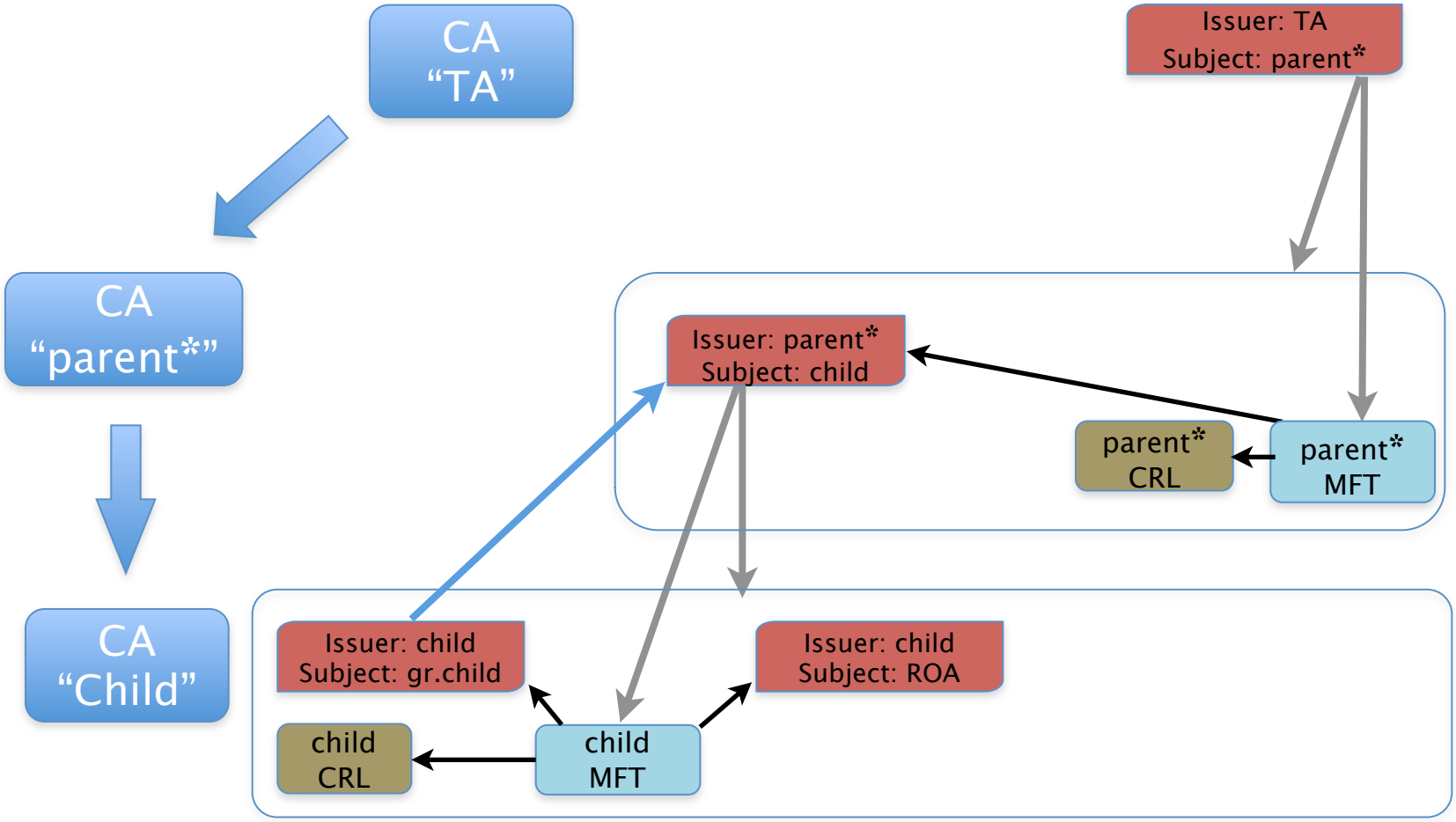
```
$ rsync --list-only rsync://certrepo.ripe.net/prod/
                    d7/0b38ff-44ce-44c2-805b-50b7489300ed/1

        EQPBzzm03_gZdrqO6tOS7eHjyXY.crl
        EQPBzzm03_gZdrqO6tOS7eHjyXY.mnf
        dkH6Hh8BYnfyVZoYaO2FcAXyn9Q.crl
        dkH6Hh8BYnfyVZoYaO2FcAXyn9Q.mnf
        anhbxfSN3kbcKt61dEkIPIULUSk.cer
        2fv72__yOQgInutV4qCKwmSdw14.cer
        CfWKr5qQwLRdsnw67qLOqSAQq4g.cer
        nKALymnMIRyMITi7oy49AlbUUhA.cer
```

# Phase 3 - Revoke old CA

10 Generate revocation request for *old* key

11 Remove *old* CRL and manifest when request is performed

# After phase 3
## old key revoked



# RIPE NCC repositories

| | |
|---|---|
| online CA & member CAs | rsync://certrepo.ripe.net/prod/ |
| resource trust anchor | rsync://certrepo.ripe.net/rta/ |
| external trust anchor | rsync://certrepo.ripe.net/eta/ |

# Questions?