NMDA Base Notification for Applied Intended Configuration

draft-wu-netmod-base-notification-nmda-00

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Update from IETF 102

- This draft defines 3 NMDA specific notifications for additional common system events.
  - Track some configurations that could not be applied to <operational> due to either validation issues, or missing resource etc
  - Help user to know the applying result of <intended> data-store and the reason why the configuration were not applied.

- Move from netconf to netmod and replace draft-wu-netconf-base-notification-nmda-02
  - Can work together with NMDA diff based on NETCONF discussion

- Changes since previous version
  - Clarify the relation with **NMDA Datastore Compare**
  - Introduce two new events intended-apply-start and intended-apply-end
  - Narrow down the existing event notification to **Applied Intended Configuration**
  - **Failure handling consideration**

Module ietf-nmda-notifications

```
module: ietf-nmda-notifications
  notifications:
    +---n intended-apply-start
    |  +--ro username          string
    |  +--ro session-id         session-id-or-zero-type
    |  +--ro source-host?        inet:ip-address
    |  +--ro commit-persist-id   string
    +---n intended-apply-end
    |  +--ro username          string
    |  +--ro session-id         session-id-or-zero-type
    |  +--ro source-host?        inet:ip-address
    |  +--ro commit-persist-id   string
    |  +--ro (complete-status)?
    |     +--:(global-errors)
    |     |  +--ro errors
    |     |     +--ro error*
    |     |        +--ro error-type         enumeration
    |     |        +--ro error-tag          string
    |     |        +--ro error-app-tag?     string
    |     |        +--ro error-path?        instance-identifier
    |     |        +--ro error-message?     string
    |     |        +--ro error-info?
    |     +--:(ok)
    |        +--ro ok?               empty
    +---n nmda-intended-applied
       +--ro username             string
       +--ro session-id           session-id-or-zero-type
       +--ro source-host?          inet:ip-address
       +--ro commit-persist-id     string
       +--ro applied-event         enumeration
       +--ro (applied-status)?
       |  +--:(global-errors)
       |  |  +--ro errors
       |  |     +--ro error*
       |  |        +--ro error-type         enumeration
       |  |        +--ro error-tag          string
       |  |        +--ro error-app-tag?     string
       |  |        +--ro error-path?        instance-identifier
       |  |        +--ro error-message?     string
       |  |        +--ro error-info?
       |  +--:(ok)
       |     +--ro ok?                   empty
       +--ro fail-applied-target*
          +--ro datastore?    identityref
          +--ro edit-id?      string
          +--ro target?       ypatch:target-resource-offset
          +--ro (applied-status-choice)?
             +--:(errors)
```
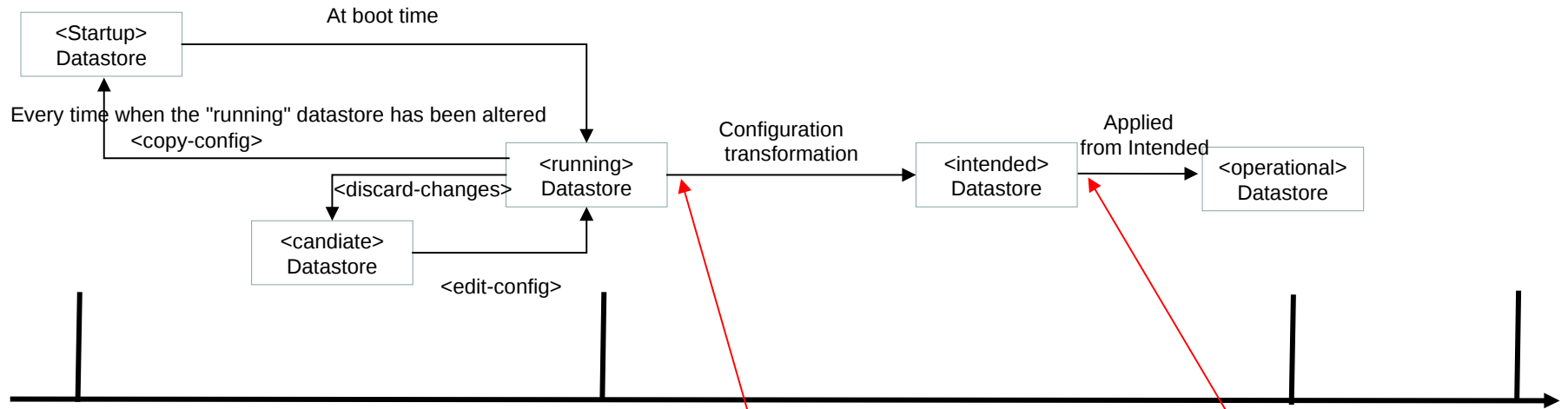
Indicate the start time of configuration applied from intended

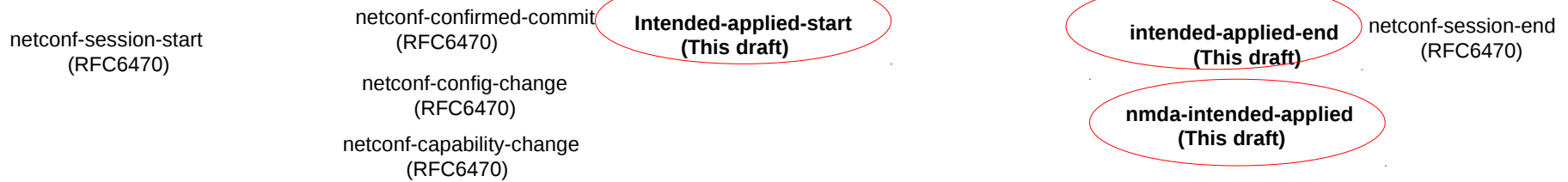Report complete status using errors grouping defined in ietf-restconf module

Relation with NMDA diff:
NMDA Diff is used to used to check which part of intended configuration data is applied or which part of intended configuration data is not applied.

3 NMDA specific Notifications

Datastore workflow

The sequence of Event Notifications

netconf-session-start
(RFC6470)

netconf-confirmed-commit
(RFC6470)

**Intended-applied-start
(This draft)**

**intended-applied-end
(This draft)**

netconf-session-end
(RFC6470)

netconf-config-change
(RFC6470)

**nmda-intended-applied
(This draft)**

netconf-capability-change
(RFC6470)

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Next Step

- Do we require intend-apply-start event?
  - Sent at the same as netconf-confirmed-commit
  - Send intend-apply-start every time commit is expensive.
  - Commit should not wait for previous intend apply complete
  - Proposal:
    - Option 1: Set it as optional? Turn it off when it is not needed.
    - Option 2: Delete it?

- Request to accept draft as WG item
  - Got already support on the list