YANG Model for Transmission Control Protocol (TCP) Configuration

draft-scharf-tcpm-yang-tcp-03

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Updates in -03

NMDA Architecture

- The model is NMDA (RFC 8342) compliant
  - Required of all new YANG modules
  - Adds two new datastores
  - Adds support for operational parameters
- A more complete example
  - On how other models can use this model
- Proposal to refine the scope of the model
  - More than just groupings
  - Proposal for what else to include is in the following slides

Read Write

candidate   startup

running

Read Only

intended

operational
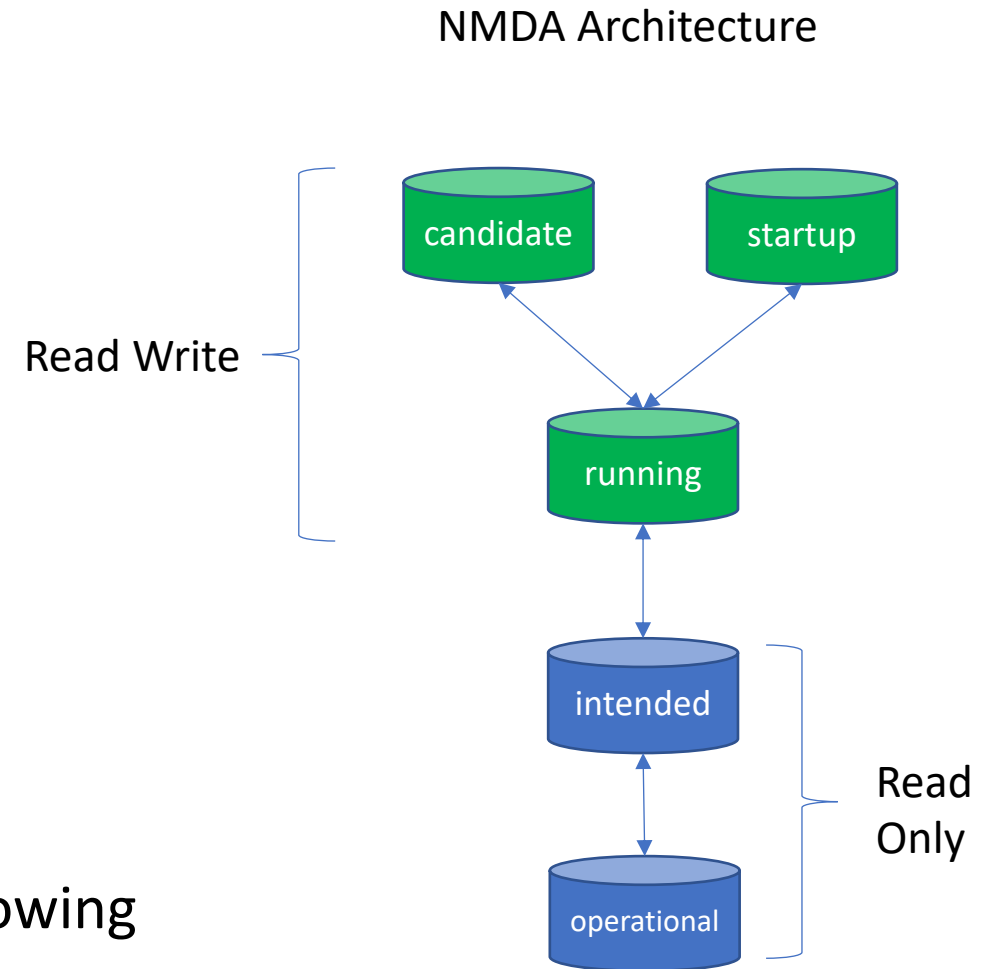
Proposal to refine the scope

1. Should the model support statistics?

2. Should it model all TCP connections?

3. Add support for TCP-AO?

4. Add support for TCP-MD5?

#1: Should the model support statistics?

- Management = configuration + monitoring
- What statistics to support?
  - Start with what is in TCP MIB today?
    - active-opens
    - passive-opens
    - attempt-fails
    - establish-resets
    - currently-established
    - in-segments
    - out-segments
    - retransmitted-segments
    - in-errors
    - out-resets

#2: Should it model all TCP connections

- Who should the list of TCP connections?
  - The application using the connection?
- TCP MIB models TCP connections
- Somewhat similar to
  - BFD sessions (draft-ietf-bfd-yang)
  - List of interfaces (RFC 8343)
- Will allow other models to refer to a common list
  - When using setsockopt(), e.g. keepalive, no delay

#3: Add support for TCP-AO?

- Other models need to configure TCP-AO
  - BGP YANG model (draft-ietf-idr-bgp-model)
- Parameters to model
  - Enable/Disable
  - Current Key
  - Rnext Key
  - Pair of Sequence Number Extensions (SNE)
  - List of Master Key Tuple (MKT)

#4: Add support for TCP-MD5?

- Other models need to configure TCP-MD5
  - BGP YANG model (draft-ietf-idr-bgp-model)
  - Most existing deployment of BGP use MD5

Q & A