

| NETCONF / YANG

Topics to investigate?

YANG 1.0 vs YANG 1.1 example

- ieee802-dot1q-bridge@2020-11-06.yang (YANG 1.0) **imports** ietf-interfaces.yang, revision not specified
- ieee802-dot1cb-stream-identification@2019-09-01.yang (YANG 1.1) **imports** ietf-interfaces.yang, revision not specified

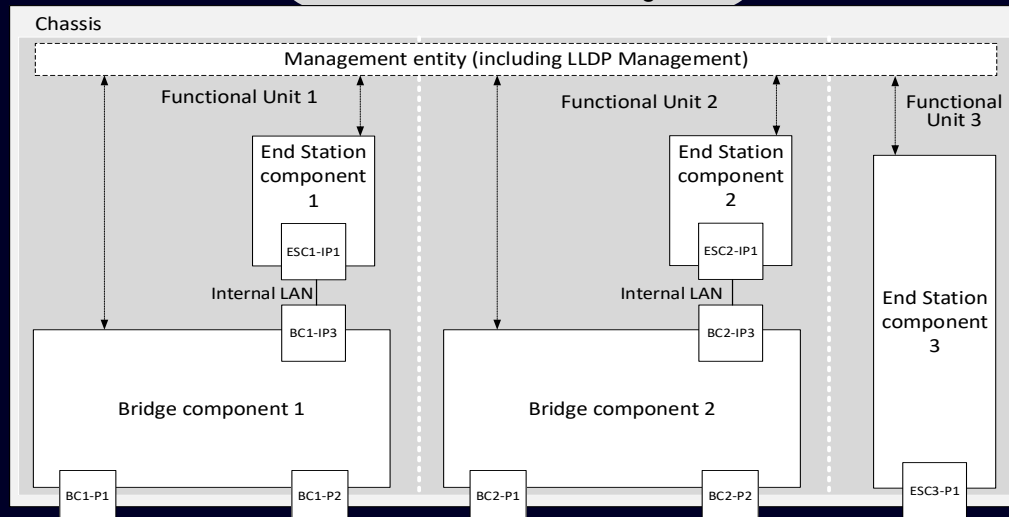
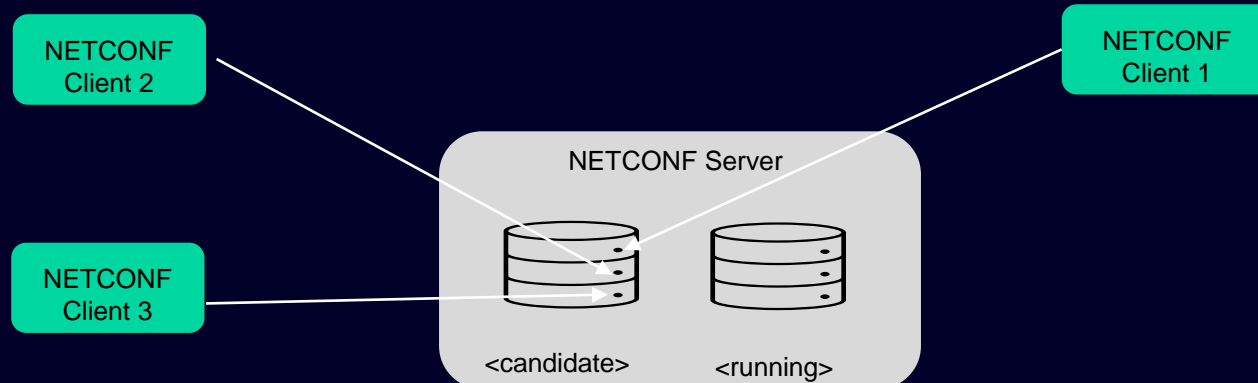
Revision	YANG Version					
ietf-interfaces@2018-02-20	YANG 1.1					
ietf-interfaces@2018-01-09	YANG 1.1					
ietf-interfaces@2017-12-16	YANG 1.1					
ietf-interfaces@2017-08-17	YANG 1.1					
ietf-interfaces@2014-05-08	YANG 1.0					
...	YANG 1.0					
ietf-interface@2010-12-08	YANG 1.0					


```

ietf-interfaces@2018-02-20
...
72: augment "/if:interfaces/if:interface/if:statistics"
...
    
```

Revision	Module	Container	Container	Config	Status	Path
ietf-interfaces@2018-02-20	statistics	container	container	no config	current	/if:interfaces-state/if:interface/if:statistics
ietf-interfaces@2014-05-08	statistics	container	container	no config	current	/if:interfaces/if:interface/if:statistics
ietf-interface@2010-12-08	statistics	container	container	no config	deprecated	/if:interfaces-state/if:interface/if:statistics

NETCONF: Simultaneous Configuration by Multiple Clients - Candidate DS



ESC - End Station component
BC - Bridge component
IP - Internal IP
P - Port

- <Candidate> datastore is mandatory
- “Dirty candidate” is not acceptable
- Serialization is not acceptable
- Partial-lock (RFC 5717) is possible only on the <running> data store, even though it was available for the <candidate> DS in the draft

IA Network Monitoring and Diagnostics Use Cases

- **Sequence of events (SOE) - a mechanism to record timestamped events from all over the plant in a common database.**
- **Application defined events are e.g. changes of digital input signal values**
- **SOE support may even be legally demanded e.g. for power generation applications**
- **The error detection shall be done within a few cycles in order to minimize the machine down time**
- **Indication of the components which have to be repaired shall occur within a few seconds**
- **A typical repair time goal is below 15 min**
- **Monitoring and diagnostics data including used TSN features shall be provided, e.g. established streams, failed streams, stream classes, bandwidth consumption**
- **Reporting of detailed diagnostics information for TSN features shall be supported**