ODL: 2024.03 Calcium update

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Agenda

• 2024.03 Calcium overview
• NETCONF
• TransportPCE
• Others
• 2024.09 Scandium lookahead
2024.03 Calcium overview

- 20th Simultaneous Release
- ~256 issues resolved
- Detailed changelog part of usual documentation
- Focus on applications:
  - NETCONF and TransportPCE account for >75% of changes
• 166 issues resolved
• OpenAPI almost completely rewritten
  - CPU/memory overheads minimized
  - Scales to extremely large models
• Unified NETCONF transport layer
  - TCP/TLS/SSH transports with consistent API supporting both ‘regular’ and ‘call-home’
  - Transport configuration based on upcoming “IETF client-server” series of RFCs
• Continued RESTCONF northbound refactor
  - Almost at the finish line now and starting to pay dividends
• 30 issues resolved
• T-API models upgraded to version 2.4
  – T-API 2.1.1 models still available, but
• OpenConfig 4.0.0 models imported for future work
• Lightynode device simulator
  – Based on lighty.io for lightweight packaging
  – Supports OpenROADM 1.2.1, 2.2.1 and 7.1.0 models
• Controller
  - Removed ask-based protocol
  - Major improvements to datastore persistence scalability

• MD-SAL
  - Remove legacy RPC/Notification interface codegen
  - Updated Cluster Singleton Service API

• YANG Tools
  - All unit tests use JUnit5
  - A few more steps to improve code modularity
• Netty-based RESTCONF server
  - Aligns plugin design with other ODL protocol plugins
  - Reduced dependencies (no JAX-RS)
  - Key enabler for YANG Push notifications

• Akka-persistence migration, part I
  - Explicit control over I/O operations, removing ~3 layers of abstraction
  - Higher throughput and lower memory footprint
  - Automagic migration step

• YANG Parser API improvements
  - Better alignment with ietf-yang-library
  - Performance improvements
Q&A