

# Kernel Projects' Aluminium/Silicon update

# Agenda

- Aluminium post-mortem
- Silicon integration deliverables
- Silicon lookahead
- Q&A

# Aluminium Kernel changes

- Upgrade to karaf-4.2.9
- Removal of leveldb persistence
- Removal of org.opendaylight.controller.md.sal et al.
- Binding ,list' mapping changes
- YANG parser wiring changes
- Binding Codec wiring changes

# Aluminium MRI experience

- Painful initial drop
  - Serviceutils, Genius, etc. scrambled to migrate MD-SAL APIs at the last moment (Apr 29)
  - Delayed version bump start (May 1, 5 days late)
  - Delayed version bump finish (May 31, 5 weeks late)
- Very long integration tail end
  - Flushed out modeling issues, code that ,happened to work'
  - CSIT stabilization past middle checkpoint, mostly in UT-light projects

# Aluminium post-mortem

- First release to really break APIs in 5 years
  - MD-SAL split started in 2015
  - Controller APIs deprecated since Sodium (warnings on DataBroker et al.)
  - Controller APIs deprecated for removal since Magnesium MRI (stern warnings on everything)
  - Intent to remove clearly communicated at Magnesium
- Binding ,list' changes incompatible
  - Latent issues with DataObject.equals() contract forcing users to do manual compares(!)
  - Issues dating back to 2014 (MDSAL-18), 2018 (MDSAL-456)
  - Not enough resources to do ,Binding V2' style fork&gradual migration

# Aluminium post-mortem (2)

- Very ambitious MRI window
  - MD-SAL wiring rework turned out to be complex
  - Problematic Magnesium release
  - Effectively a one-man show on MRI side
- Little communication between projects
  - Lack of day-to-day engagement and cross-project people
- „Managed Projects“ concept does not work
  - There was no resource lending for the past 18 months
  - There is no real engagement

# Silicon MRI (odlparent-8)

- Maven-modernizer is now enforcing
  - Opt-out switch `odlparent.modernizer.enforce`
  - Configured for JDK11 minimum, no warnings for `ImmutableList` et al.
- Removal of `odl-apache-sshd`, no longer used
- Removal of `odl-akka-*`, rehosted to controller
- Removal of dependencies used by a single project
  - Neutron is the only user of `org.eclipse.persistence`
  - `LispFlowMapping` is the only user of `jettison`
  - AAA is the only user of `Felix DM`

# Silicon MRI (infrautils-1.9)

- JobCoordinator improvements
  - Object keys instead of String
  - Enqueue results in a ListenableFuture, which completes when the job processing ends
- Clean up of org.opendaylight.infrautils.util
  - Optionals, ClassLoaders, CompletableFutures, CompletionStages, JdkFutures are all gone



# Silicon MRI (yangtools-6)

- Stricter YANG parsing
  - Enforcing ,pattern' arguments' validity
  - Enforcing ,must' and ,when' arguments' validity
- Further evolution of yang.model.api
  - Use EffectiveModelContext instead of SchemaContext
  - SchemaPath is being deprecated
  - Improvements to effective model footprint

# Silicon MRI (mdsal-7)

- Notification router does not use LMAX
  - Switched to QueuedNotificationManager to lower CPU usage
- Binding list Key classes enforce non-null components
- Binding Runtime codecs are now properly isolated
- Improved Binding equals()/hashCode()/toString()
- Some model movement
  - Removed odl-uint24, draft-clemm L3/TED models
  - Added RFC8346 (L3-topology), RFC8776 (TE-types), RFC8795 (TE-topology)

# Silicon MRI (controller-3)

- Akka/Scala packaging
- ... but more to come in the release train

# Silicon GA (controller-3.0.x)

- Improved journal memory footprint
- Most probably akka-2.6.10+
- Likely switch to Artery
- Small bugfixes, nothing major
- Deprecate message-bus for removal

# Silicon GA (mdsal-7.0.x)

- Probably Notification Transformers
- Codegen improvements (javadoc)
- Minor bugfixes
- Query interface evolution (?)

# Silicon GA (yangtools-6.0.x)

- RFC8791 (YANG data structure) parser support
- OpenConfig pattern interop
- Minor bugfixes

# Silicon GA (others)

- Infratils: nothing expected
- ODLParent: minor updates
- AAA: nothing expected
- NETCONF:
  - RFC8040 refactoring
  - NETCONF layering cleanups

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- AAA: no changes, switch to MRI
- NETCONF:
  - RFC8040 refactoring
  - NETCONF layering cleanups
  - Probably switch to MRI



# Q&A

- Feedback?
- Questions?
- Answers?

# About Us.

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# Thank you!

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