# IJLF NETWORKING

LFN Developer & Testing Forum



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# Supporting Commercial OpenDaylight Deployments

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#### Agenda



- What is commercial deployment?
- Why to do it?
- What are the challenges?
- How to overcome those?
- How can we benefit?

#### What is it?



- OpenDaylight distribution deployed by customer
- We provide customer support for extended periods
  - How-to
  - Fixes
  - Enhancements

#### Motivation



- Customers unable to deploy at current release velocity due to required operational practices
  - Time to validate & deploy: lab tests, security compliance, compatibility, integration points, device versioning, etc.
  - Customers internal projects life-cycle
  - Overheads of maintaining cadence of ODL releases
  - Failing to a limited number of people
- Customers require Long Term Support (LTS) distribution

## Challenges



- Place to store supported code-base
- CI/CD infrastructure to build and test ODL
- Release notes and documentation
- Delivery to the customer
- Diagnosing issues in customer deployment
- Sync with upstream code-base
- Resource optimization

## **Source Code Versioning**



- Mirror open-source repositories into your organization
  - GitHub, GitLab, Gerrit

 To avoid confusion with open-source, use your own versioning schema

## Release Cycle



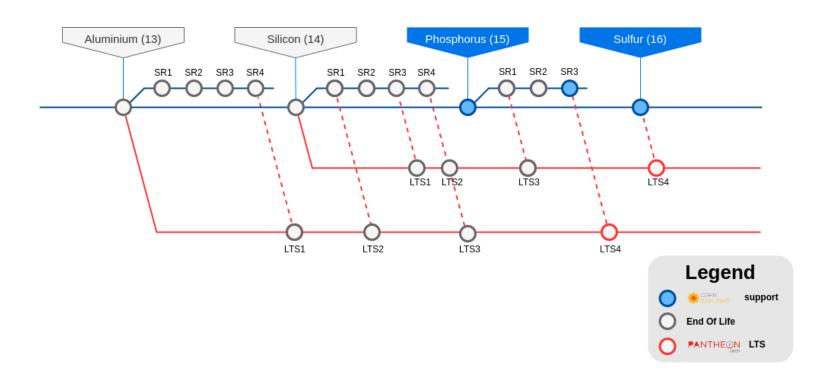
LTS versions have no strict release cycle

 Provide new LTS release on customer demand and/or periodically

 When updating to later ODL release, reset custom versioning to zero/one

## LTS Versioning Example





#### Infrastructure



- Need for own CI/CD infrastructure to
  - Verify patches
  - Build distribution
  - Test distribution
  - Publish artifacts

Automatize as much as possible

#### **Documentation**



- Create (at least) semi-automated script to gather release notes
  - Mention improvements done in open-source
  - Mention improvements done by you

## **Delivery**



Need for delivery channel to the customer

- Artifacts
  - Nexus
- Documentation
  - Cloud storage for documents

## **Diagnostics**



Simply asking for details

- Using automated diagnostic tools/scripts to collect run-time information
  - Java environment
  - Operating system
  - System resources

#### **Contribute Back**

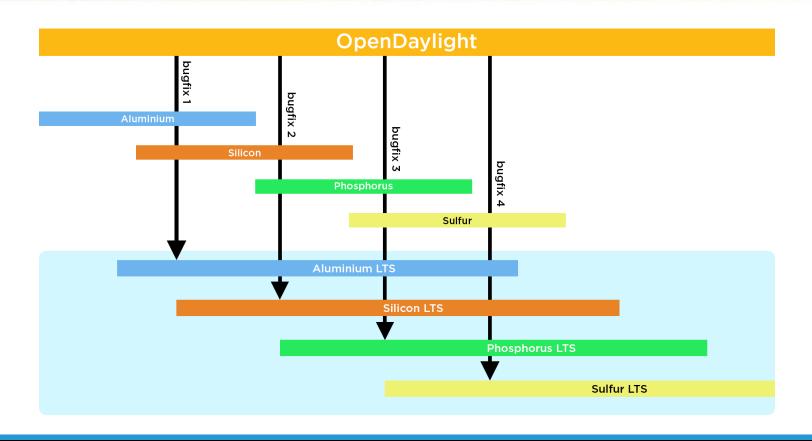


 The best way to not lost patches created during support period on LTS version, is to publish them to the latest open-source

 When upgrading to newer ODL versions, you will find all your work already there ©

#### **Contribution Schema**





## **Optimize Resources**



Follow best practices

Use available solutions

#### **Best Practices**



- Use your own versioning schema
- Automatize release, release notes process
- Use and enhance tools which already exist
- Upstream bug-fixes and improvements with open-source community

#### **Available Solutions**



- OpenDaylight's tool to bump versions
  - https://github.com/skitt/odltools/blob/master/bump-odl-version
- OpenDaylight's release notes script
  - https://github.com/opendaylight/docs/blob/master/ docs/ext/odl-jira.py
- OpenDaylight's test and deploy scripts
  - See releng/builder, integration/test and other ODL projects

#### **Benefits**



- Benefits for customer
  - Security and performance improvements delivered to no-more supported releases
- Benefits for community
  - Customers share the cost of improvements and bug-fixes delivered to open-source
- Benefits for you
  - Opportunity to monetize your effort contributed to OpenDaylight

## **Current Highlights**



- Provided security release for log4j2 vulnerability and other security issues
- Cherry-picked fixes to enable tell-based protocol in LTS version
- Developed segmented journal and nettyreplicator on customer's demand to opensource upstream



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Questions?

### Thank you for attending!



- Useful links
  - pantheon.tech
  - opendaylight.org
  - wiki.opendaylight.org

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