

# Set Sail for a Ship-Shape Istio Release

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# First a Quick Note

This talk focuses on producing more predictable and stable releases. Please join us in the the Istio Slack to help us understand your concerns.

And a question... How are you consuming Istio?

- Istio 1.9 was recently released.
- How soon will you investigate this release?
- How soon before you will use it in production?



# Feedback Across

- GitHub issues
- [discuss.istio.io](https://discuss.istio.io)
- Twitter
- User discussions
- Upgrade survey

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# Common Feedback

- Users found upgrades challenging
- Releases were inconsistent
  - Release and Upgrade Notes
  - Release date slip
  - Release with known issues
  - Performance and resource usage
- Istio community didn't have a process



# Led To

- Upgrade Working Group
- Release Note Generation
- Definition of Done

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# Upgrade Working Group

**Mission: To improve the stability, user experience, and test infrastructure around Istio upgrades**

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# Upgrade Working Group - Stability

- Standards and processes
  - Control plane behavior
  - Data plane communication
- Promote revision-based upgrades to stable and support skip-level revision-based upgrades
- Update or create documentation on upgrades across all supported methods
  - Test documentation using istio.io test framework



## Upgrade Working Group - User Experience

- Add pre-checks to identify and warn about known potential issues
  - Provide a clear path forward





## Upgrade Working Group - Test Infrastructure

- Extend and improve the testing infrastructure
- Extend and add testing of upgrades across all supported methods.



# Definition of Done

**Goal: To make Istio releases and feature quality consistent and predictable**



# Definition of Done: Approach

- Automation where possible
- For everything else, make information easy to consume through checklists and continuous feedback

## So Far...

- Release Notes tooling
- Feature Maturity Process
- Release Maturity Process



# Release Notes

## Old System

**Expectation:** Maintainers would populate a Google docs draft throughout a release which is finalized before the release ships..

**Reality:** Week(s) of time for release managers to sift through commits to figure out what changed and write notes, often without context.

## New System

GitHub asks developers and maintainers whether a pull request has user facing changes.

- If it does, the developer can easily add a release note.
- If it doesn't, then the developer can check a box and the pull request will merge.



# Release Notes: As a result...

- Release notes are thought of up-front as part of changes, with context by the people who know the most about what's being changed.
- Release notes and upgrade notes are no longer easily forgotten.
- The process has gone from weeks to hours for major releases and hours to minutes for patch releases.

**Better communication of what's important to users and more time saved for developers.**



# Feature Maturity

- Consistent checklist of requirements for each maturity level: experimental, alpha, beta, and stable
- Ensuring appropriate documentation, testing, and code completion is done for each level
- Making sure that features continue to mature



# Release Maturity

- Provide a consistent list of requirements for each type of release: security, patch, major
- Where to post announcements
- What to look for when examining releases
  - Performance
  - Resource usage
  - Open issues
  - Features being promoted
  - Release notes and upgrade notes



# Continuous Release Health

- New dashboard being created to allow visibility of release health
- Open issues and priorities
- Issues being promoted
- Features awaiting documentation
- Weekly performance
- Open release blockers





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- Doug Reid
- Sven Mawson
- Jason Wang
- Martin Ostrowski
- Steve Dake



# Thank you!

Istio Slack: #test-and-release, #upgrade

Istio working group meetings: [tinyurl.com/istioWorkgroups](https://tinyurl.com/istioWorkgroups)

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