



FedoraTM

Developer Introduction

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Learning Outcomes

- Communicate value of cross-institutional collaboration process
- Feel comfortable getting involved in development sprints
- Be able to articulate technology stack and tools
- Know where to look for more details

Sprints

- 2 weeks in length
- Scheduled in 6-month phases
- Standard Agile Scrum weekly schedule
- All community developers

Agile/Scrum Teams

- Daily stand-up
- Product and Sprint backlogs
- Scrum
- Sprint
- Sprint planning
- Sprint retrospective
- Velocity

Support Tools

Pivotal Tracker

- Bug tracking system
- Tightly tied with git commits
- Ticket flow/process

Travis-CI

- Continuous integration testing
- Run automatically via GitHub
- Basic sanity build on each commit

Jenkins

- Continuous integration build server
- Publishes snapshot build artifacts to sonatype
- Publishes code-coverage and stats to sonar

Sonar

- Dashboard of codebase health
- Test code coverage
- Code problem areas, or hotspots
- Total lines of code and complexity, etc.

The Basics

Java7 Webapp

- Fedora is a standard Java7 web-application
 - Jetty and Tomcat, or one-click
 - Deployed as a war
- Configuration via
 - Configuration files
 - System-properties
 - Repository objects/resources

Maven3

- Build tool
- Manages library dependencies, build artifacts, code formatting, integration tests, release signing and deployment, code-coverage, etc
- Release artifacts are deployed to maven-central

GitHub

- <https://github.com/fcrepo4>
- <https://github.com/fcrepo4-labs>
- Main F4 codebase: fcrepo4

Other GitHub Projects

- ontology
- fcrepo-message-consumer
- fcrepo-module-auth-rbac
- fcrepo-module-auth-xacml
- fcrepo-build-tools
- fcrepo-sample-dataset

Git Process

- Standard
 - Fork the codebase
 - Commit to a branch
 - Send pull request
- Facilitates collaboration

Application Stack

- Top - Fedora webapp
 - Adds preservation and access sensibilities
 - Linked data, LDP abstraction
- Middle - JCR implementation
 - Modeshape - OSS JCR reference implementation
- Bottom - Storage/Caching
 - Infinispan - OSS Java caching and persistence
 - Foundation of clustering exposed through the stack

Background Reading

- JAX-RS 2 (jersey2)
- JCR
- Infinispan
- Modeshape
- Maven3
- Guava
- wiki - process, documentation, roadmap