THE OPENSTACK CI ECOSYSTEM

Sirushti Murugesan
HP Cloud

AGENDA

Tools Overview
CI/Testing Workflows

AUTOMATION TOOLS

Zuul
Gearman
Jenkins
Nodepool
DevStack Gate
JeepyB
CookieCutter
Puppet CM

DEVELOPER TOOLS

IRC
Etherpad
Gerrit/Git
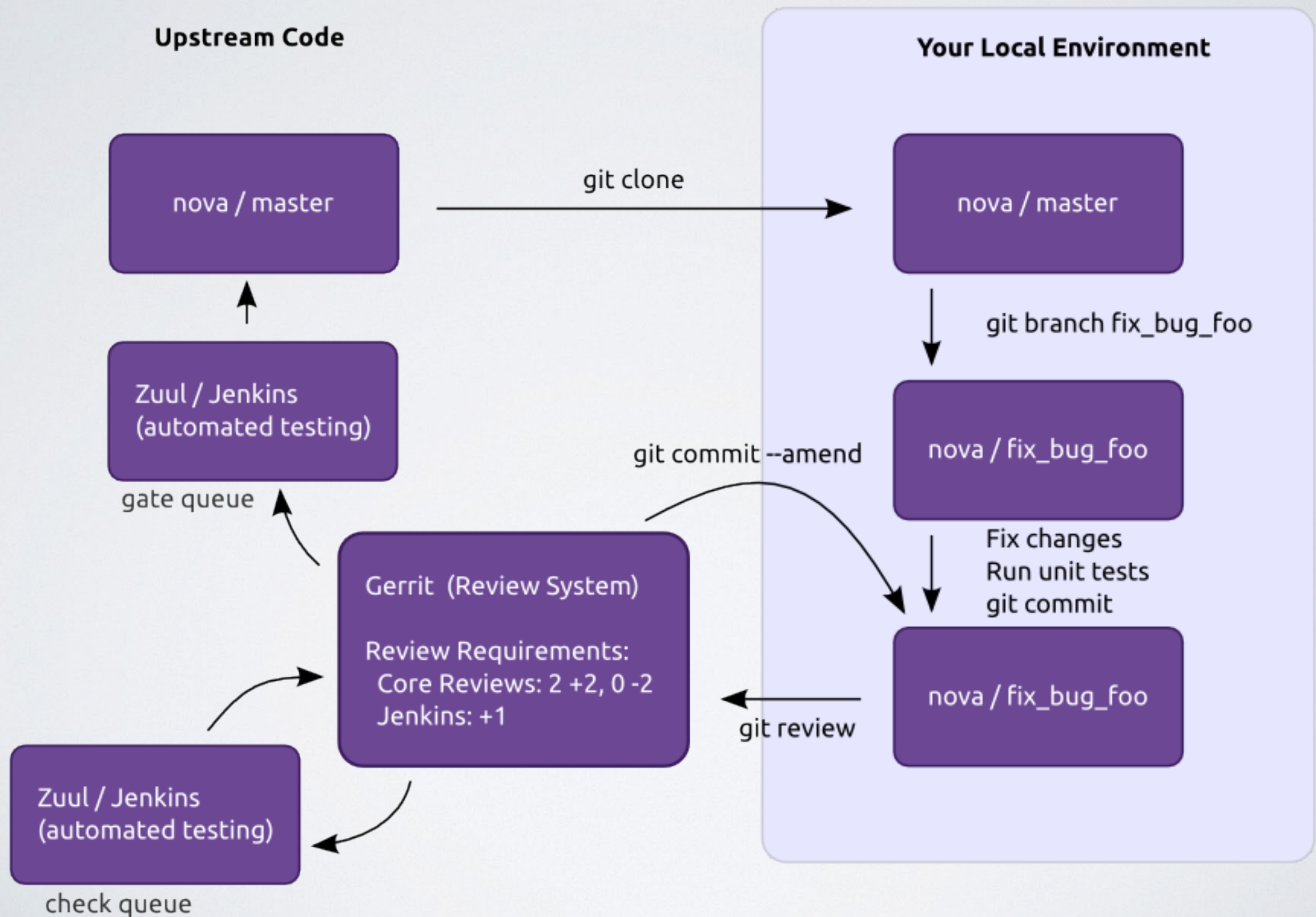DevStack
Launchpad
Paste
E-mail

TOOLS FOR TESTS

Tempest
Rally
Elastic Recheck
Grenade

TOOLS FOR RELEASES

openstack-infra/release-tools
openstack-dev/python-build-reasonables
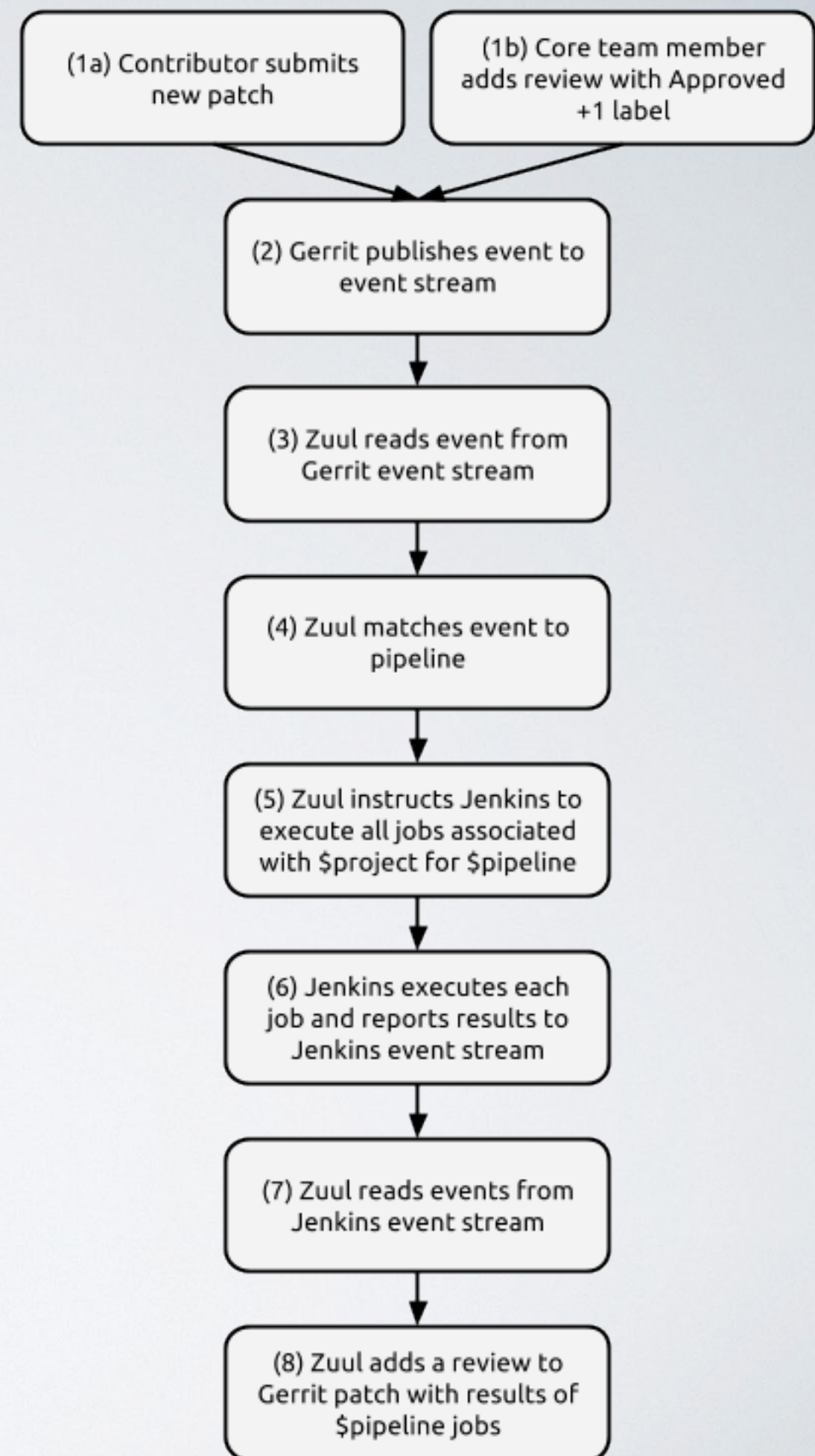
GIT DEVELOPER-WORKFLOW
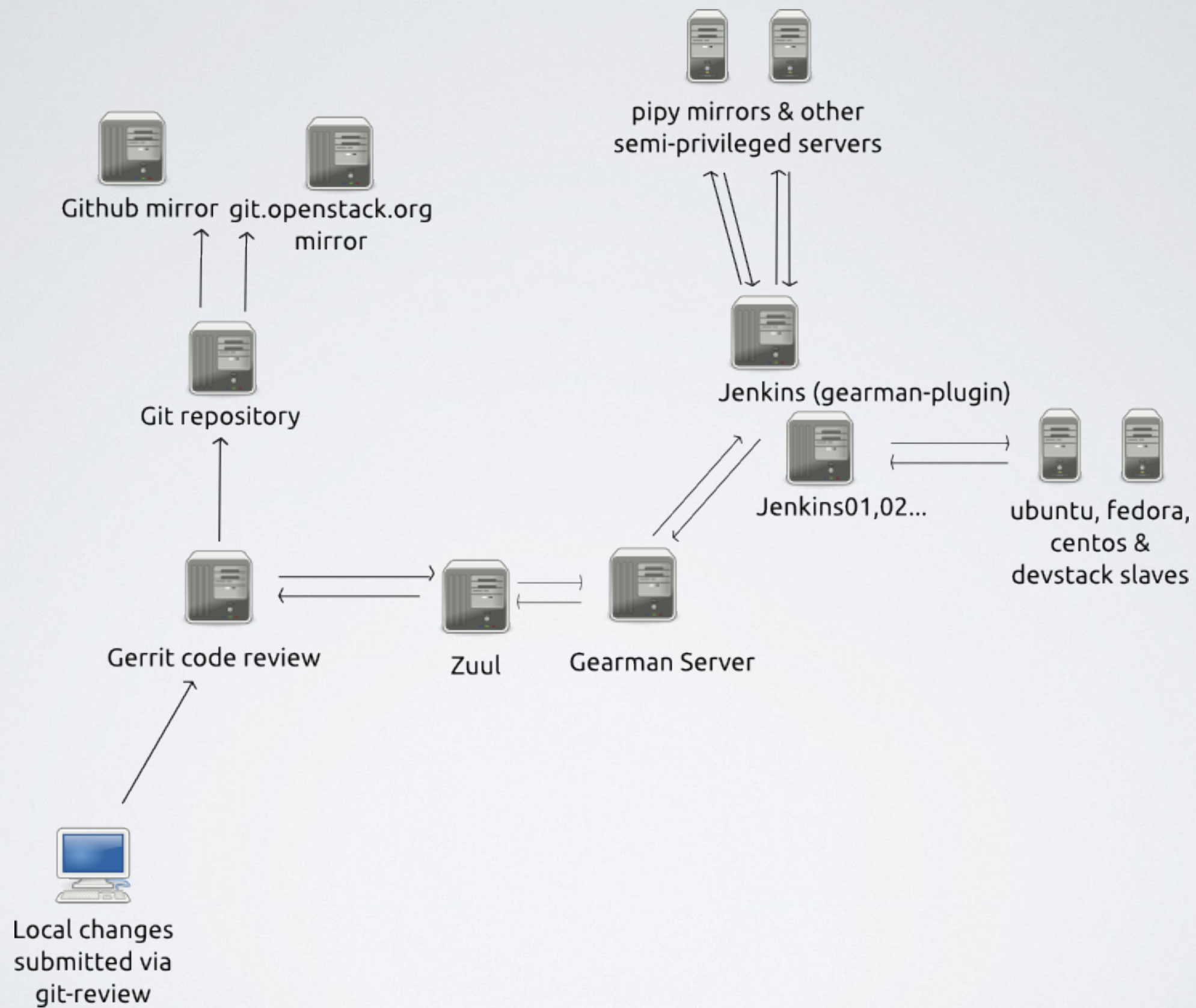
GERRIT CODE-REVIEW

- The gate(the Jenkins guy here) reviews the code first to run all the necessary tests defined.

- Non-core reviewers get to +1 or -1, core reivewers get -1,+1,+2,-2,+A

- Front-end interface to the developers. Everything that happens in the background is magic.

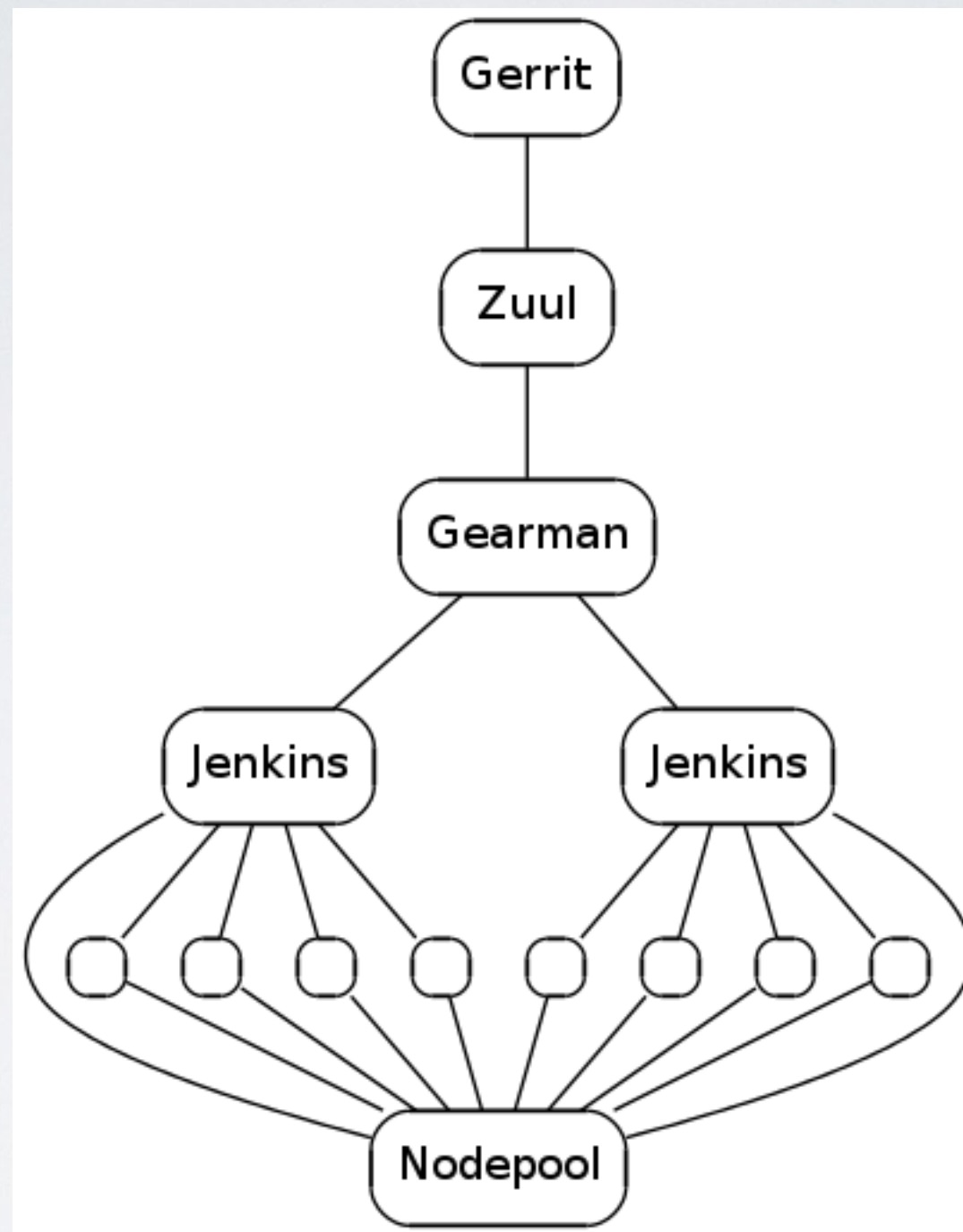- Developers get to choose dependencies if they want to.

Reviewer	Verified	Code-Review	Approved
Jenkins	+1		
Nadya Privalova		-1	
Julien Danjou			
Ruslan Kamaldinov			

Reviewer	Verified	Code-Review	Approved
Eoghan Glynn			
Julien Danjou		✓	
Flavio Percoco		+2	✓
Jenkins	+1		

POST CODE-REVIEW BACKGROUND WORKFLOW

pipy mirrors & other
semi-privileged servers

Github mirror git.openstack.org
mirror

Git repository

Jenkins (gearman-plugin)

Jenkins01,02...

ubuntu, fedora,
centos &
devstack slaves

Gerrit code review

Zuul

Gearman Server

Local changes
submitted via
git-review

CODE TESTING CRITERIA

- Style checks

- Merge checks

- Unit tests

- Functional tests

- Integration/Cross-Project tests

- Upgrade tests

- Vendor (3rd-party CI) tests

- Perf/Scale tests

- Code-complexity checks

MERGE CRITERIA

The integrated Gate - ZuulDependantPipeline Algorithm

AND FINALLY.....

The Code is merged into the version control system(Git)

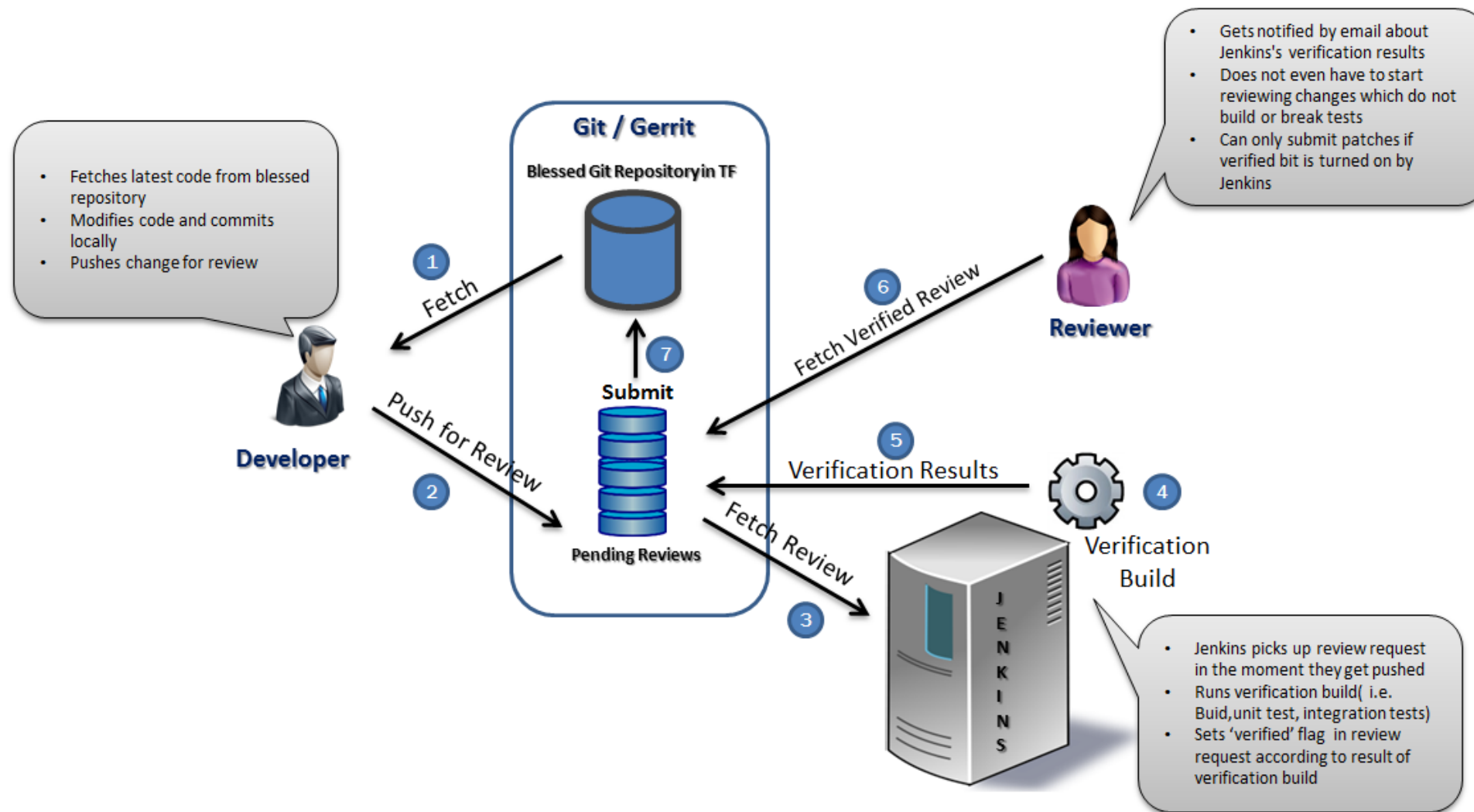The bug/spec tracking system is updated if necessary

Releases are done considering all the bugs/specs fixed/ implemented respectively in the said period of time.

RELEASE PROCESS

- An OpenStack release happens every 6 months. Releases use the following workflow.

    - Get PTL signoff.

    - Deferring blueprints and bugs.

    - Tag, wait for tarball build, process FixCommitted bugs, check similarities and upload (if applicable)

    - When all projects are done, announce milestone and publish tarballs.

SUMMARY

Git / Gerrit Work Flow with Jenkins Continuous Integration

THE END