



OPENSIFT[™]
by Red Hat[™]

Openshift on Azure CI overview

Michalis Kargakis
@kargakis
Software Engineer, Red Hat















Agenda

- Infrastructure (Prow, Gubernator, ci-operator)
- Tests (install, upgrade, unit, verify, ...)
- Release artifacts (plugin code, sync, SRE tooling)

Infrastructure (Prow)

- A set of microservices written in Go
- Manage every Github interaction. Automated test runs. Automated pull request merges.
- Extend the Kubernetes API to hold state about test runs (ProwJobs)
- Support running test workloads either in Pods or in Jenkins

Infrastructure (Prow)

Prow Status					
Filter all job types all repositories >> all pull requests all authors pull-ci-openshift-azure-upgrade all states Showing 11/11 jobs					
2		9			
Repository	Revision	Job	Started	Duration	
!   openshift/openshift-azure	#384 (3e0d131) by kargakis	pull-ci-openshift-azure-upgrade	08:29:56	2m52s	
!  		pull-ci-openshift-azure-upgrade	06:29:17	4m3s	
!  		pull-ci-openshift-azure-upgrade	04:28:04	2m44s	
!   openshift/openshift-azure	#328 (e9c7cde) by kwoodson	pull-ci-openshift-azure-upgrade	Sep 10 20:12:37	1h58m55s	
✓   openshift/openshift-azure	#374 (1c56b6b) by kargakis	pull-ci-openshift-azure-upgrade	Sep 10 20:12:09	1h19m23s	
!   openshift/openshift-azure	#384 (3e0d131) by kargakis	pull-ci-openshift-azure-upgrade	Sep 10 20:11:54	40m38s	
✓   openshift/openshift-azure	#377 (a1a511d) by kargakis	pull-ci-openshift-azure-upgrade	Sep 10 18:15:14	1h32m18s	








Infrastructure (Prow)


Merge Requirements: (click to expand)

Repo	State	Batch	Passing	Pending	Queued for Retest
openshift/openshift-ansible master	WAIT			#9717	#9977
openshift/openshift-ansible release-3.11	WAIT				#9991
openshift/origin master	WAIT			#20889	

Infrastructure (Prow)

 **Some checks haven't completed yet** [Hide all checks](#)
1 pending and 3 successful checks

	ci/prow/e2e Pending — Job triggered.	Details
	ci/prow/unit — Job succeeded.	Details
	ci/prow/verify — Job succeeded.	Details
	tide — In merge pool.	Details

 **This branch has no conflicts with the base branch**
Merging can be performed automatically.

Squash and merge ▾

 or view [command line instructions](#).



Infrastructure (Prow)

- Co-developed in kubernetes/test-infra

<https://github.com/kubernetes/test-infra/blob/master/prow>

- Openshift deployment running in CI cluster


Prow console: <https://deck-ci.svc.ci.openshift.org/>

CI cluster: <https://api.ci.openshift.org/>

Detailed Prow overview [here](#)

Infrastructure (Gubernator)

Expose test artifacts under a user-friendly view*



openshift/openshift-azure PR #387
pull-ci-openshift-azure-conformance #3
[Recent runs](#) | [View job in Jenkins](#)

Result	FAILURE
Tests	17 failed / 212 succeeded
Started	2018-09-11 08:55 CEST
Elapsed	41m53s
Version	

[artifacts](#) [build log](#)

Test Failures

[Conformance][Area:Networking][Feature:Router] The HAProxy router should set Forwarded headers appropriately [Suite:openshift/conformance/parallel] 11m13s

Command: go run hack/e2e.go -v -test --test_args="--ginkgo.focus=\\[Conformance\\]\\[Area:Networking\\]\\[Feature:Router\\]\\\$The\\\$HAProxy\\\$router\\\$should\\\$set\\\$Forwarded\\\$headers\\\$appropriately\\\$\\[Suite:openshift/conformance/parallel\\]\\\$"

```
/tmp/openshift/build-rpms/rpm/BUILD/origin-3.10.0/_output/local/go/src/github.com/openshift/origin/test/extended/router/headers.go:42
Expected error:
  <*errors.errorString | 0xc4206ca050>: {
    s: "last response from server was not 200:\n",
  }
  last response from server was not 200:

not to have occurred
/tmp/openshift/build-rpms/rpm/BUILD/origin-3.10.0/_output/local/go/src/github.com/openshift/origin/test/extended/router/headers.go:80
Click to see stdout/stderr from junit_12.xml
```

Filter through [log files](#)

 **OPENSSHIFT**
by Red Hat

Infrastructure (Gubernator)

- Co-developed in kubernetes/test-infra

<https://github.com/kubernetes/test-infra/tree/master/gubernator>

- Openshift deployment running on GCE

<https://openshift-gce-devel.appspot.com>

Infrastructure (ci-operator)

- Extend Prow with the ability to run test pipelines
- Provide a user friendly travis-like API to configure jobs
- Run in short-lived pods orchestrated by Prow, create temporary namespace, run pipeline steps, cleanup
- Reuse successful pipeline steps from a previous test run for the same commit

Infrastructure (ci-operator)

Docs:

<https://github.com/openshift/ci-operator/blob/master/ONBOARD.md>

<https://github.com/openshift/ci-operator/blob/master/CONFIGURATION.md>

<https://github.com/openshift/ci-operator/blob/master/TEMPLATES.md>

Tests

We run tests during different points of the development:


- On every pull request (presubmits)
- On every commit in master (postsubmits)
- Periodically (periodics)









Tests


We also run different kinds of tests:

- Unit tests
- Verification tests
- E2E tests:
 - Install + osa-specific e2e
 - Install + origin conformance
 - Install + upgrade

Tests

 **Some checks haven't completed yet** [Hide all checks](#)
1 pending and 3 successful checks

	 ci/prow/e2e Pending — Job triggered.	Details
	 ci/prow/unit — Job succeeded.	Details
	 ci/prow/verify — Job succeeded.	Details
	 tide — In merge pool.	Details

 **This branch has no conflicts with the base branch**
Merging can be performed automatically.

Squash and merge ▾

or view [command line instructions](#).



OPENSIFT

by Red Hat

Tests

In the near future we want:

- Scale up/down tests
- Increase coverage in OSA-specific tests
- Improve success ratio of the Origin conformance suite

Longer term:

- Regression tests
- Performance tests

Tests

Configuration stored in [openshift/release](#)

- Job specs

<https://github.com/openshift/release/tree/master/ci-operator/jobs/openshift/openshift-azure>

- Ci-operator config

<https://github.com/openshift/release/blob/master/ci-operator/config/openshift/openshift-azure/master.yaml>

- E2E tests execute via Openshift templates

<https://github.com/openshift/release/tree/master/ci-operator/templates/openshift-azure>



OPENSIFT

by Red Hat

Release artifacts

Output of all the great development and CI testing:

- Plugin code
 - Vendored by Microsoft inside the Openshift Resource Provider in Azure
 - No additional step yet to release apart from merging in master
- Sync image
 - Built on every merged commit and mirrored in
- SRE tooling (logbridge, prometheus-sidecar, ...)





OPENSIFT[®]
by Red Hat[®]

Fin