

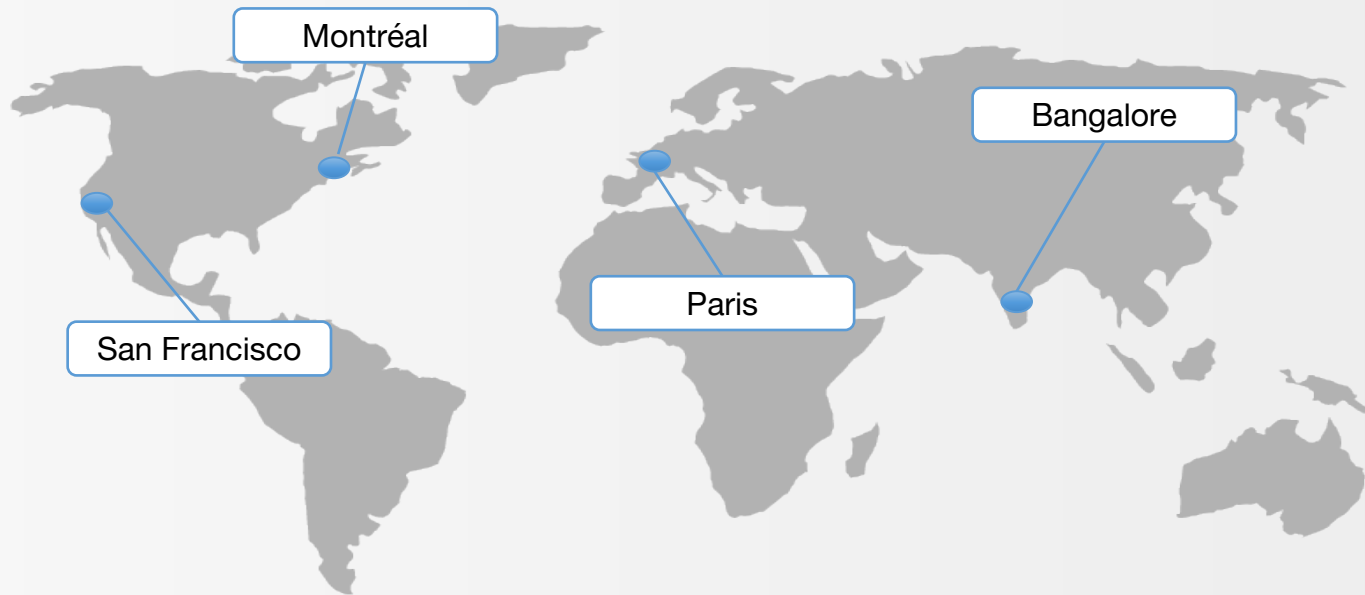


## WhatTheStack?



**Verify your Deployments using Tempest**

# “ Seamless Build & Delivery of Open Cloud Infrastructures ”



**120+**  
People

**150+**  
Customers

**\$11M**  
Revenues

**Top 10**  
Openstack  
Contributor

## Christian Schwede

- Developer @ eNovance
- Been working on OpenStack since 2012
- Swift core dev
- testing and automation specialist
- @cschwede\_de / cschwede on IRC

## Nick Barcet

- VP Products & Pre-Sales @ eNovance
- Been working on OpenStack since Austin
- Founded OpenStack Telemetry (aka Ceilometer)
- Travelling the world doing OpenStack
- @nijaba on irc & twitter

- Motivation
- Deployment testing
- Using Tempest for deployment testing
- Simplify usability: a web app
- The next step: [whatthestack.org](http://whatthestack.org)
- Outlook

- Customers asking for deployment verification
- Testing requires a lot of manual work
- Idea: simple tool to test and summarize results
  - don't reinvent - use Tempest
- Results might be overwhelming

- Ensure correct functionality
- Verify API behavior
- Detect missing features
- Report successful deployment
- Compare to other deployments

- web app: no installation required
  - usable by non-developers
- Executed by an independent vendor
- Results are shared easily



Using Tempest for testing



- No image upload
  - Cirros missing? Select smallest available image
- API change between OpenStack releases
  - might break a whole lot of tests
- Customized backends
  - Authentication, Image service

- User-executable tests only
- Skip duplicate (JSON/XML) & negative tests
- Test core functionality
  - Keystone: authenticate (obvious)
  - Nova: create/boot server, floating IPs, flavors
  - Swift: upload/download/delete objects
  - Glance: select image

- Keystone credentials ⇒ tempest.conf
  - Smallest Nova image
  - Smallest Nova flavor
  - Network ID
- Execute subset of API tests
- Summarize results

```
devstack:~/devstack$ source openrc
```

```
devstack:~$ tempest-discover
```

```
Configuration written to /tmp/tempest_conf_0pJA1I
```

```
Set TEMPEST_CONFIG_DIR and TEMPEST_CONFIG to use this file:
```

```
export TEMPEST_CONFIG_DIR=/tmp
```

```
export TEMPEST_CONFIG=/tmp/tempest_conf_0pJA1I
```

```
devstack:~$ nosetests tempest.api.object_storage.test_object_services
```

```
.....
```

```
-----
```

```
Ran 28 tests in 4.325s
```

```
OK
```

Failed tests:

`tempest.api.object_storage.test_container_sync`

Successful tests:

`tempest.api.object_storage.test_container_quotas`

`tempest.api.object_storage.test_container_services`

`tempest.api.object_storage.test_container_staticweb`

`tempest.api.object_storage.test_object_expiry`

`tempest.api.object_storage.test_object_services`

`tempest.api.object_storage.test_object_version`

Object Storage (Swift): Grizzly (or later)

- Basic Object services

- Container Quota

- Object expiring

- Object versioning

- CLI - not for everyone
- Created simple web app
  - a. Enter keystone credentials
  - b. Wait until your tests finished
  - c. view summary by services
- Let's open it to the public!



## The easiest way to test your OpenStack deployment



### Discover

Verify which services are running on your cloud



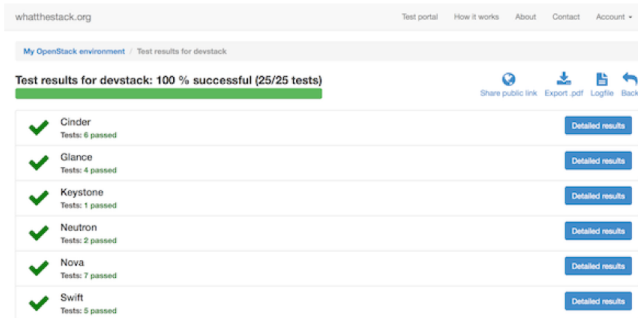
### Testing

Run a full stack of automated tests



### Reporting

Get detailed reports including low-level test output



Log in >

## Easily launch Tempest Tests

- ✓ 100% automatic: no need to configure your test settings
- ✓ Always up to date: whatthystack.org uses the latest version of Tempest
- ✓ Dozens of tests

[How it works »](#)

★ Fully compliant with latest OpenStack release





My OpenStack environment

My Openstack deployment  
<https://keystone.localhost/v2.0>

+ Add new configuration

## Configuration editor



### Description

My Openstack deployment

### OpenStack credentials

#### Username

christian@enovance.com

#### Password

.....

#### Keystone URL

<https://keystone.localhost/v2.0>

☒ Select tenant name automatically

☐ I accept the [Terms of Use](#) and read [Good to know before starting test](#)

Delete

Cancel

Save

Edit

Test reports

Start new test

[My OpenStack environment](#) / Test results for devstack

## Test results for devstack: 100 % successful (25/25 tests)

[Share public link](#)[Export .pdf](#)[Logfile](#)[Back](#)

### Cinder

Tests: 6 passed

[Detailed results](#)

### Glance

Tests: 4 passed

[Detailed results](#)

### Keystone

Tests: 1 passed

[Detailed results](#)

### Neutron

Tests: 2 passed

[Detailed results](#)

### Nova

Tests: 7 passed

[Detailed results](#)

### Swift

Tests: 5 passed

[Detailed results](#)

[My OpenStack environment](#) / [Test results for devstack](#) / [Swift details](#)

Swift details for devstack test on Jan. 7, 2014, 5:44 p.m.

[Logfile](#)[Back](#)

Success

5

Error

0

**Static web middleware**

Test: tempest.api.object\_storage.test\_container\_staticweb

[Test logs](#)**Versioned object support**

Test: tempest.api.object\_storage.test\_object\_version

[Test logs](#)**Container quota middleware**

Test: tempest.api.object\_storage.test\_container\_quotas

[Test logs](#)**Basic object actions**

Test: tempest.api.object\_storage.test\_object\_services

[Test logs](#)**Basic container actions**

Test: tempest.api.object\_storage.test\_container\_services

[Test logs](#)

[My OpenStack environment](#) / [Test results for My Cloud](#) / [Swift details](#)

Swift details for My Cloud test on May 8, 2014, 11:13 a.m.

[Logfile](#) [Back](#)Success **2**Error **4****Basic object actions**

Test: tempest.api.object\_storage.test\_object\_services

[Test logs](#)**Basic container actions**

Test: tempest.api.object\_storage.test\_container\_services

[Test logs](#)

[My OpenStack environment](#) / [Test results for My Cloud](#) / [Swift details](#)

Swift details for My Cloud test on May 8, 2014, 11:13 a.m.

[Logfile](#)[Back](#)[Success](#) **2**[Error](#) **4****Container quota middleware**

Test: tempest.api.object\_storage.test\_container\_quotas

[Test logs](#)**Temporary URL middleware**

Test: tempest.api.object\_storage.test\_object\_temp\_url

[Test logs](#)**Static web middleware**

Test: tempest.api.object\_storage.test\_container\_staticweb

[Test logs](#)**Versioned object support**

Test: tempest.api.object\_storage.test\_object\_version

[Test logs](#)

[My OpenStack environment](#) / [Summary](#) / [Swift details](#) / [Output](#)

Swift test log for My Cloud test on May 8, 2014, 11:13 a.m.

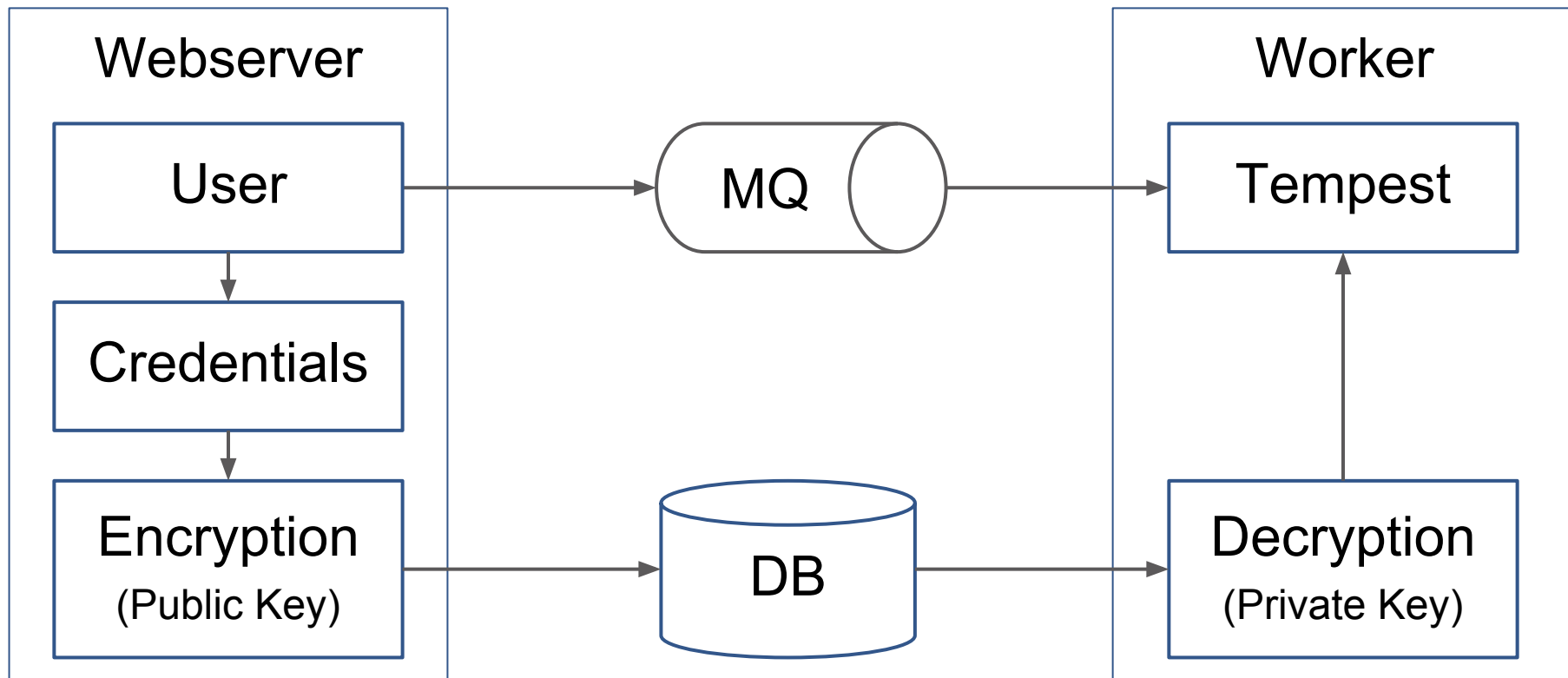
Test: tempest.api.object\_storage.test\_container\_quotas



```
tempest.api.object_storage.test_container_quotas.ContainerQuotasTest.test_upload_large_object[gate,smoke] ... FAIL
tempest.api.object_storage.test_container_quotas.ContainerQuotasTest.test_upload_too_many_objects[gate,smoke] ... FAIL
tempest.api.object_storage.test_container_quotas.ContainerQuotasTest.test_upload_valid_object[gate,smoke] ... ok
```

```
=====
FAIL: tempest.api.object_storage.test_container_quotas.ContainerQuotasTest.test_upload_large_object[gate,smoke]
-----
```

```
_StringException: pythonlogging:': {{{
2014-05-08 11:14:51,778 Request (ContainerQuotasTest:setUp): 200 POST http://mycloud.local:5000/v2.0/tokens
2014-05-08 11:14:52,033 Request (ContainerQuotasTest:setUp): 201 PUT http://mycloud.local:8080/v1/AUTH_76b1d43cacf146d9ae59c74a1e7b04df/TestCon
tainer-1631969758 0.253s
2014-05-08 11:14:52,143 Request (ContainerQuotasTest:setUp): 204 POST http://mycloud.local:8080/v1/AUTH_76b1d43cacf146d9ae59c74a1e7b04df/TestCo
ntainer-1631969758 0.105s
2014-05-08 11:14:52,255 Request (ContainerQuotasTest:test_upload_large_object): 204 HEAD http://mycloud.local:8080/v1/AUTH_76b1d43cacf146d9ae59
c74a1e7b04df/TestContainer-1631969758 0.110s
2014-05-08 11:14:52,312 Request (ContainerQuotasTest:test_upload_large_object): 201 PUT http://mycloud.local:8080/v1/AUTH_76b1d43cacf146d9ae59c
74a1e7b04df/TestContainer-1631969758/TestObject-384934890 0.054s
2014-05-08 11:14:52,392 Request (ContainerQuotasTest:tearDown): 200 GET http://mycloud.local:8080/v1/AUTH_76b1d43cacf146d9ae59c74a1e7b04df/Test
Container-1631969758?&limit=9999&format=json 0.076s
2014-05-08 11:14:52,641 Request (ContainerQuotasTest:tearDown): 204 DELETE http://mycloud.local:8080/v1/AUTH_76b1d43cacf146d9ae59c74a1e7b04df/T
estContainer-1631969758/TestObject-384934890 0.246s
2014-05-08 11:14:52,888 Request (ContainerQuotasTest:tearDown): 204 DELETE http://mycloud.local:8080/v1/AUTH_76b1d43cacf146d9ae59c74a1e7b04df/T
estContainer-1631969758 0.245s
}}}
```





Outlook



- Community works on core definition
- Looking forward to integrate upcoming test definitions
- Continue contribution to Tempest

- Register yourself on [www.whatthestack.org](http://www.whatthestack.org)
- whatthestack is hosted by eNovance
  - Tests are executed queued
  - Limited numbers of stored test results and tests
- Give us Feedback
- [github.com/enovance/tempest-report](https://github.com/enovance/tempest-report)

