

## **Survey Questions**

*A study to understand the usefulness of various code review comments*

### **Purpose:**

You are being asked to be in a research study to understand the characteristics of useful code reviews, since you have been an active participant in code reviews within the OpenStack community. Your anonymous response will provide researchers with data from which to glean important insights regarding the categories of code review comments that are deemed most useful by developers. These insights may help to improve the effectiveness of code reviews. This study is being conducted at Wayne State University.

### **Study Procedures**

If you take part in the study, you will be asked to complete a web survey that will take approximately 20 minutes.

### **Benefits**

There will be no direct benefits to you for participating in the survey. However, the findings will provide the researchers with data from which to glean important insights to improve the effectiveness of contemporary code reviews.

### **Risks**

There are no risks associated with participating in this study.

### **Costs**

There will be no costs to you for participation in this research study.

### **Compensation**

As an appreciation for your efforts, we will offer \$10 Amazon gift cards to 10 randomly selected respondents. If you wish to participate in the random drawing, please provide

your email address at the end of this survey.

**Confidentiality:**

All data gathered will be anonymous from the time of collection. No identifying information will be associated with the data. There is no risk associated with lack of privacy. Only Dr. Bosu and his graduate students will have access to the data. The data will be stored on Dr. Bosu's password protected computer and secured survey hosting site (Qualtrics). Only summarized data will be presented at meetings or in publications.

**Voluntary Participation /Withdrawal:**

Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates. If you have any questions about this study now or in the future, you may contact Amiangshu Bosu or one of his research team members at the following phone number 313-577-0731. If you have questions or concerns about your rights as a research participant, the Chair of the Institutional Review Board can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call the Wayne State Research Subject Advocate at (313) 577-1628 to discuss problems, obtain information, or offer input.

**Participation**

By completing the survey, you are agreeing to participate in this study.

The data that you provide may be collected and used by Qualtrics as per its privacy agreement. Additionally, if you are under the age of 18, please do not complete this survey.

☐ I consent, begin the study

☐ I do not consent.

**Demographics**

The questions in this page aims to collect your demographics to better understand how a developer's background may influence his/her perception of the usefulness of

code review comments. However, we do not wish to uniquely identify you by any means.

What is your highest level of education?

- ☐ High school
- ☐ Bachelors
- ☐ Masters
- ☐ Ph.D.
- ☐ Other

Which gender do you identify yourself with?

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ Prefer not to disclose

How many years of software development experience do you have?

Do you have an open source project that you consider as your primary project (i.e. the project that you have spent most of your time) ?

What are your roles in your primary project (please check all appropriate roles below)?

- ☐ Developer
- ☐ Maintainer
- ☐ Testing
- ☐ UI Design

- ☐ Documentation
- ☐ Requirement analysis
- ☐ Software Architect
- ☐ Other (please specify)

How many years have you been practicing tool-based code reviews?

How many hours per week, on average, do you spend reviewing other contributors code?

In your opinion, what makes a code review useful?

Approximately, what proportion of code reviews in your project, do you feel are useful (i.e., fits the above definition)?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Percent

Please rate the following categories of code review comments based on their perceived usefulness to you?

Defects (identification of functional defects)

Coding convention (e.g.,  
white space, blank lines,  
indentation)

Resource management

Logical mistake (incorrect  
logic)

API Integration (wrong or  
unsecured API call )

Naming convention  
(alternate identifier name)

Refactoring (changing the  
organization of the code  
without changing any  
functionality)

Documentation (adding  
comments to explain a  
method or class)

Praise (complement to the  
author)

Question (asking to clarify  
a code segment)

Solution approach  
(suggestions for an  
alternate solution  
approach)

Validation (inadequate  
validation of inputs)

Alternate output (changing  
output/ log/ error  
message)

Thread synchronization

Design discussion  
(directions to improve  
current design)

In each of the following pages, you will be shown an example code review from the OpenStack Nova project. To better understand the context, code snippets surrounding each review comment will be also included. Please read each code review comment as well as its surrounding code context and rate each code review on a scale of 1 to 10, based on your perceived usefulness of each review comment.

```
526         if related_actual_child_idx is not None:
527             matched_actual_child_idx.add(actual_child_idx)
528         else:
529             return XMLExpectedChild(state, expected_child.tag,
530                                     first_actual_child_idx + 1)
```

Feb 19, 2019

This is going to give you 1, but (if I understand the error case correctly) you actually want 0.  
Suggest instead initializing `actual_child_idx` to -1 above the loop at L506.

[Reply](#) [Quote](#) [Done](#)

Feb 19, 2019

Confirmed that this does the wrong thing, based on your new failing test case - but my suggestion also does the wrong thing. I couldn't suss it after diddling with it for a couple of minutes; so I leave it to you :P

[Reply](#) [Quote](#) [Done](#)

```
531         # Make sure we consumed all nodes in actual
532         for actual_child_idx, actual_child in enumerate(actual):
533             if (actual_child.tag not in self.SKIP_TAGS and
534                 actual_child_idx not in matched_actual_child_idx):
535                 return XMLUnexpectedChild(state, actual_child.tag,
536                                             actual_child_idx)
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

890     # prepare_template() may have cloned the image into a new rbd
891     # image already instead of downloading it locally
892     if not self.exists():
893         fmt = None
894         if not CONF.force_raw_images:
895             image_meta = IMAGE_API.get(kwargs.get('context'),
896                                       kwargs.get('image_id'))
897             fmt = image_meta.get('disk_format')

```

Feb 27, 2019

This is user-defined, so this is not a trusted source either. If you have a look at how we handle this in `fetch_to_raw` we explicitly sanity check the backing file because we can't trust it.

Please don't duplicate that code here, when we can just use it directly to do the conversion for us, making this code redundant. Also please don't add any code which relies on a malicious qcow2 header having been previously detected, because there is no strong guarantee that this will always be the case in the future, and an innocuous and easy-to-miss mistake would re-introduce a severe security hole.

[Reply](#) [Quote](#) [Done](#)

Feb 28, 2019

Done

[Reply](#) [Quote](#) [Done](#)

```

898         self.driver.import_image(base, self.rbd_name, fmt)
899         self.verify_base_size(base, size)

```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

1059     try:
1060         value = filters_utils.validate_num_values(
1061             aggregate_vals, multiplier_config, cast_to=float)
1062     except ValueError as e:
1063         LOG.warning("Could not decode weight multiplier: '%s'", e)

```

Jan 19, 2019

Include the `multiplier_name` value in this message.

[Reply](#) [Quote](#) [Done](#)

Jan 21, 2019

Done

[Reply](#) [Quote](#) [Done](#)

```

1064         value = multiplier_config
1065
1066     return value

```

How useful do you find the above code review on a scale of 1

to 10, if you are the author?

```
131         if ironic_url is None:
132             LOG.warning("Could not discover ironic_url via keystoneauth1: "
133                         "Adapter.get_endpoint %s", ironic_url_none_reason)
134         # NOTE(eandersson): We pass in region here to make sure
```

Apr 23 10:49 AM

This is good as is, but I want to note for posterity some of the background/details.

This is tightly coupled to the ironicclient implementation, specifically [1]. The \*\*kwargs to the get\_client method is documented only as "all the other params that are passed to keystoneauth1" [2]. This is vague and not completely true at least in terms of Adapter kwargs. It's also not a prescriptive/proscriptive interface, so ironicclient can change up the internals as it sees fit - as we saw very recently right next door with the addition of interface handling [3].

Basically, it sucks how the ksa pieces of this puzzle are put together. It's brittle and will keep breaking in ways similar to this one, and we should fix it.

[1] <https://github.com/openstack/python-ironicclient/blob/060029ffcae8bbbd2315947cd059b701b5c31c39/ironicclient/client.py#L121>

[2] <https://github.com/openstack/python-ironicclient/blob/060029ffcae8bbbd2315947cd059b701b5c31c39/ironicclient/client.py#L66>

[3] <https://github.com/openstack/python-ironicclient/commit/d6eea403cbf0d11b06acbecc704f422a7e278462>

Reply Quote Done

```
135         # that the Ironic client can make an educated decision when
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
7668         try:
7669             self.rtr.update_available_resource(context, nodename,
7670                                               startup=startup)
7671         except exception.ComputeHostNotFound:
7672             # NOTE(comstud): We can get to this case if a node was
7673             # marked 'deleted' in the DB and then re-added with a
7674             # different auto-increment id. The cached resource
7675             # tracker tried to update a deleted record and failed.
7676             # Don't add this resource tracker to the new dict, so
7677             # that this will resolve itself on the next run.
```

Jan 14, 2019

Remove this comment, which refers to a time when we had a ResourceTracker instance per baremetal Ironic node.

Reply Quote Done

Jan 15, 2019

Done

Reply Quote Done

```
7679         LOG.info("Compute node '%s' not found in "
```



How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
3009 migration)
3010     if pci_mapping:
3011         for net in network_info:
3012             for old_dev, new_dev in pci_mapping.iteritems():
```

Feb 15, 2019

Use items() instead of iteritems() because iteritems is not supported in python 3.

Reply Quote Done

```
3013         if net['profile']['pci_slot'] == new_dev.address:
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
316     # The dict maps domain types such as 'kvm' to the emulator
317     # path for that domain type. Note that these overrides come
318     # from <emulator> elements under each <domain>; there is no
319     # <domemulator> element.
320     self.domemulator = dict()
```

Mar 5, 2019

consider renaming this domain\_type\_emulator\_map or domain\_type\_emulators to make it clearer what it contains/does.

Reply Quote Done

```
321
322     def parse_dom(self, xmldoc):
323         super(LibvirtConfigCapsGuest, self).parse_dom(xmldoc)
324
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
696     if CONF.ironic.partition_key is not None:
697         peer_list = set(CONF.ironic.peer_list)
698         # these configs are mutable; need to check at runtime and init.
699         # luckily, we run this method from init_host.
700         _check_peer_list()
701         LOG.debug('Limiting peer list to %s', peer_list)
702
703     service_list = objects.ServiceList.get_all_computes_by_hv_type(
704         ctxt, self._get_hypervisor_type())
```

Feb 26, 2019

A future improvement might be to only call `ServiceList.get_all_computes_by_hv_type()` if `CONF.ironic.peer_list` is `None`. Otherwise, add a new `ServiceList.get_compute_by_hosts()` method that allows you to filter to just the `peer_list` values.

[Reply](#) [Quote](#) [Done](#)

Feb 27, 2019

++, added a TODO

[Reply](#) [Quote](#) [Done](#)

```
705     services = set()
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```

303     try:
304         uuids = self._provider_tree.get_provider_uuids(
305             rp_uuid, whole_tree=True)
306     except ValueError:
307         # If the provider isn't in the tree, it should also not be in the
308         # timer dict, so nothing to clear.
309         return
310
311     # get_provider_uuids returns UUIDs in top-down order, so the first one
312     # is the root; and .remove() is recursive.
313     self._provider_tree.remove(uuids[0])

```

Jan 14, 2019

if you take my advice about having a separate function on ProviderTree that does the tree-traversal stuff here, instead of passing a whole\_tree=True argument, you might consider making that new function ProviderTree.remove\_subtree() and wrap the removal code into the function. You can have ProviderTree.remove\_subtree() return the list of remove UUIDs, as well, so that lines 314-315 will be possible.

That way, you wrap the related tree-fetch-and-removal code together in a single-purpose method on ProviderTree and leave ProviderTree.get\_provider\_uuids() method as-is.

[Reply](#) [Quote](#) [Done](#)

Jan 14, 2019

.remove already does remove the subtree. The new method would have a different name but do the same thing except for what it returns? May as well modify .remove to return the UUIDs.

...which I also considered. Ended up going with this approach as the lesser (or at least a coin flip) of two evils. Again, if you feel strongly, I can twiddle it to be different-but-equally-awkward. LMK.

[Reply](#) [Quote](#) [Done](#)

Jan 15, 2019

Having written get\_provider\_uuids\_in\_tree, I'd like to keep the deletion non-consolidated to facilitate the test cases if that's cool.

[Reply](#) [Quote](#) [Done](#)

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

1390         members_on_host = ins_on_host & members - set([instance.uuid])
1391         if migration:
1392             mgs_same_host_and_node = objects.MigrationList. \

```

Apr 4 12:35 PM

would be clearer as just "migrations" I think. It took me some thinking to realize that "mgs" meant "migrations".

[Reply](#) [Quote](#) [Done](#)

Apr 8 1:52 AM

Done

[Reply](#) [Quote](#) [Done](#)

```

1393         get_in_progress_by_host_and_node(
1394             context, host=migration.dest_compute,

```

How useful do you find the above code

review on a scale of 1  
to 10, if you are the  
author?

```
2353
2354 class TooManyDiskDevices(NovaException):
2355     msg_fmt = _('The maximum allowed number of disk devices to attach to a '
2356               'single instance has been exceeded')
2357     code = 403
```

Dec 13, 2018

could it be better if we show what the limit is in the error message? Otherwise as an user, I may have to test out what the limit is.

[Reply](#) [Quote](#) [Done](#)

Dec 20, 2018

Yeah, good idea. Will add.

[Reply](#) [Quote](#) [Done](#)

```
2358
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```
8982 | @mock.patch('nova.objects.RequestSpec')
```

Dec 18, 2018

Something I learned from melwitt: if you add a 'new=mock.Mock' argument here, you don't need to pass an argument to the function. Maybe useful if you need to rework this.

[Reply](#) [Quote](#) [Done](#)

Dec 18, 2018

Eric has mentioned that to me forever, but meh.

[Reply](#) [Quote](#) [Done](#)

```
8983 | def test_rebuild_with_deleted_image(self, mock_reqspec):
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```
2096 | def _build_and_run_instance(self, context, instance, image, injected_files,
This is another huge method. It would be nice to throw your logic that builds the dict into a private helper
method and call that from within here.
2097 |
2098 | ++
2099 |
factored out in a fup.
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
664 |
665 | def _get_by_host(ctxt):
666 |     return objects.ComputeNodeList.get_all_by_host(ctxt, host)
This can also raise ComputeHostNotFound so do you want to handle that and return an empty list like L661
above and L672 below?
Good catch. Yes, I do. Thanks.
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

45
46 echo '3. test with Ceph for root + ephemeral disks'
47 GetOSVersion

```

Mar 14, 2019

nit: a comment about why this is needed would be good

[Reply](#) [Quote](#) [Done](#)

```

48 prepare_ceph
49 GLANCE_API_CONF=${GLANCE_API_CONF:-/etc/glance/glance-api.conf}
50 configure_and_start_glance
51
52 configure_and_start_nova
53 run_tempest "Ceph nova&glance test" "^.test_live_migration(?!.*(test_volume_backed_live_migration))"
54

```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

1461 Starting with the 19.0.0 Stein release, the ``nova-compute`` service will
1462 report certain ``COMPUTE_*`` traits based on its compute driver capabilities
1463 to the placement service. The traits will be associated with the resource
1464 provider for that compute service. These traits can be used during scheduling
1465 by configuring flavors with
1466 :ref:`Required traits <extra-specs-required-traits>` or
1467 :ref:`Forbidden traits <extra-specs-forbidden-traits>`. For example, if you
1468 have a host aggregate with a set of compute nodes that support multi-attach

```

Mar 19, 2019

Can I ask why this case related to host aggregate? without aggregate, we also can choice correct host, right?

[Reply](#) [Quote](#) [Done](#)

Mar 19, 2019

Let's say you have a mixed hypervisor deployment, or a set of computes that are not yet upgraded, so they don't support multiattach volumes. You could roll out the multiattach volume support feature on a subset of the deployment by creating an aggregate and then restricting flavors which are advertised as working for multiattach volumes to that aggregate. It's a bit of a stretch but it is a use case, along with any other use case for the AggregateInstanceExtraSpecsFilter. But as you say, it can also be used without aggregates, which is why I referenced this from the ComputeCapabilitiesFilter section.

[Reply](#) [Quote](#) [Done](#)

Mar 19, 2019

ok, I see now, you want to show this is another option for that usecase.

[Reply](#) [Quote](#) [Done](#)

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

310 @property
311 def compute_rpcapi(self):
312     # Lazy load the rpcapi/ComputeAPI upon first use for this connection.
313     # This way, if we receive a TCP RST, we will not create a ComputeAPI
314     # object we won't use.
315     if not self._compute_rpcapi:
316         self._compute_rpcapi = compute_rpcapi.ComputeAPI()
317     return self._compute_rpcapi

```

Mar 27, 2019

oh, that's way nicer than the LazyLoader I would have hacked together.

[Reply](#) [Quote](#) [Done](#)

318

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```

22
23 def test_cells_list(self):
24     ex = self.assertRaises(api_client.OpenStackApiException,
25                             self.api.api_get, 'os-cells')
26     self.assertEqual(410, ex.response.status_code)

```

Apr 15 11:14 AM

nit: you could avoid the explicit 410 check with `assertRaises` by passing `check_response_status=[410]` to `api_get`.

[Reply](#) [Quote](#) [Done](#)

Apr 16 4:35 AM

Done

[Reply](#) [Quote](#) [Done](#)

27

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```
35 from nova.objects import instance as obj_instance
36 from nova import rc_fields as fields
37 from nova import rpc
38 From nova.scheduler.filters import filters_utils
```

wrong import

[Reply](#) [Quote](#) [Done](#)

Jan 11, 2019

```
39
40
41 LOG = logging.getLogger(__name__)
42
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```
3647 put_call = mock.call(
3648     '/allocations/%s' % uuids.consumer_uuid, updated_allocations,
3649     version='1.28', global_request_id=self.context.global_id)
3650
3651 mock_put.assert_has_calls([put_call] * 4)
```

excellent unit tests, thank you Gibi.

[Reply](#) [Quote](#) [Done](#)

Feb 28, 2019

```
3652
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?



```

336         if api_version_request.is_supported(request, min_version="2.63"):
337             trusted_certs = None
338             if instance.trusted_certs:
339                 trusted_certs = instance.trusted_certs.ids
340                 server["server"]["trusted_image_certificates"] = trusted_certs
341
342         if (api_version_request.is_supported(request, min_version="2.71") and

```

Feb 25, 2019

This is kind of weird that we pass in show\_server\_groups=True but then are also checking the microversion. Why not just have the caller pass in show\_server\_groups based on the microversion? Because when this is called from detail() you're going to be checking the microversion for every instance even though show\_server\_groups will always be False for detail(). Just have the caller figure out the microversion and pass in show\_server\_groups and honor that boolean.

[Reply](#) [Quote](#) [Done](#)

Feb 27, 2019

Done

[Reply](#) [Quote](#) [Done](#)

```

343         show_server_groups):

```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

904         for node in self.node_cache.values():
905             if instance.uuid == node.instance_uuid:
906                 break
907         else:
908             # if we can't find the instance, fall back to ironic
909             return _fetch_from_ironic(self, instance)

```

Feb 14, 2019

This is a change in behavior where, if \_validate\_instance\_and\_node doesn't raise, the result from self.ironicclient.call('node.get\_by\_instance\_uuid', ...) will be returned instead of a hardware.InstanceInfo object. I didn't think that's intended, but let me know if it is.

[Reply](#) [Quote](#) [Done](#)

Feb 18, 2019

Oof, good catch. Thanks!

[Reply](#) [Quote](#) [Done](#)

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
30 from oslo_service import fixture as service_fixture
31 from oslo_utils.fixture import uuidsentinel as uuids
```

Nov 20, 2018

This needs to go away. uuidsentinel was introduced in oslo.utils 3.37.0. This file needs to continue using the nova fixture (see L70).

[Reply](#) [Quote](#) [Done](#)

```
32 from oslo_utils import timeutils
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
1214
1215 @mock.patch('nova.objects.BlockDeviceMappingList.get_by_instance_uuid')
```

Jan 24, 2019

Why do you need this mock?

[Reply](#) [Quote](#) [Done](#)

Jan 24, 2019

That's residual from my first approach when I tried to mock an instance with 26 devices already attached. But because the fake driver doesn't implement or pass through get\_device\_name\_for\_instance, that approach can't work. Will remove.

[Reply](#) [Quote](#) [Done](#)

```
1216 def test_attach_vol_maximum_disk_devices_exceeded(self, mock_get_bdms):
1217     self.useFixture(nova_fixtures.CinderFixtureNewAttachFlow(self))
1218
```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```
276 def clear_provider_cache(self):
277     LOG.info("Clearing the report client's provider cache.")
278     self._provider_tree = provider_tree.ProviderTree()
```

Nov 6, 2018

(thinking out loud)

If the existing ProviderTree is being operated on in a greenthread and is holding the lock, that's no biggie because that entire ProviderTree will go out of scope when any references to it do, so there ought not be any issues there.

(I'm not even certain if we have potential for that situation, now)

[Reply](#) [Quote](#) [Done](#)

```
279     self._association_refresh_time = {}
280
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```
175  
176 Checking allocations and inventories for virtual GPUs  
177 -----  
178  
179 |
```

nit: drop the extra blank line

Mar 25, 2019

[Reply](#) [Quote](#) [Done](#)

```
180 .. note::  
181
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```
549 |         if 'ignore_hosts' in spec and spec.ignore_hosts:
```

Feb 22, 2019

This isn't right, what you want to do is add it to L527 using an "in" statement. IOW, don't modify ignore\_hosts during the lifetime of this RequestSpec object in memory, but don't persist it either.

[Reply](#) [Quote](#) [Done](#)

```
550         spec.ignore_hosts = []  
551  
552         spec.obj_reset_changes()  
553  
554         return spec
```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```

1913     # Now get the resource allocations for the instance based
1914     # on its embedded flavor.
1915     resources = scheduler_utils.resources_from_flavor(
1916         instance, instance.flavor)
1917     if dry_run:
1918         output(_('[dry-run] Create allocations for instance %(instance)s '
1919             'on provider %(node_uuid)s: %(resources)s') %
1920             {'instance': instance.uuid, 'node_uuid': node_uuid,
1921             'resources': resources})

```

Apr 12, 2019

So this will return None, and boo(None) is False so num\_processed are not incremented and therefore num\_processed will stay at 0 and that will result in exit code 4.

[Reply](#) [Quote](#) [Done](#)

Apr 12, 2019

Thanks for writing this.

[Reply](#) [Quote](#) [Done](#)

```

1922     else:
1923         if placement.put_allocations(
1924             ctxt, node_uuid, instance.uuid, resources,
1925             instance.project_id, instance.user_id,
1926             consumer_generation=None):
1927             output(_('Successfully created allocations for '
1928                 'instance %(instance)s against resource '
1929                 'provider %(provider)s.') %
1930                 {'instance': instance.uuid, 'provider': node_uuid})
1931     return True

```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

2444     if 'user_id' not in mapping:
2445         mapping.user_id = instance.user_id

```

Mar 6, 2019

From L2491 if this is an instance from a down cell where the user\_id is set from the RequestSpec, the user\_id here might be None which will blow up because InstanceMapping.user\_id is not nullable but RequestSpec.user\_id and Instance.user\_id are nullable. -1 for that.

[Reply](#) [Quote](#) [Done](#)

Mar 6, 2019

Ah, thank you for catching that.

[Reply](#) [Quote](#) [Done](#)

```

2446         mapping.save()

```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

320     # RBD volume doesn't support QCOW2 for hosting a virtual machine disk.
321     # Thus if you want to boot virtual machines in RBD volume, the image
322     # format must be RAW.
323     # If you set the force_raw_images to False and the glance image format
324     # is QCOW2, the format of image file here is QCOW2.
325     # So that, get and check the format of image file. Then choose the
326     # right way to import rbd volume from image file.
327     data = images.qemu_img_info(base)
328     fmt = data.file_format

```

Feb 26, 2019

This is the security hole: you're doing format inspection. It doesn't matter if you do the format inspection during a convert or in an info command; it's still the same format inspection.

In order for this to be secure you would have to pass the input format to qemu-img info explicitly, in which case you wouldn't need to run it anyway. But you can't pass it, because we don't have it in this context. IOW: you can't do this here.

If a user can construct a malicious qcow2 header, declare the file as raw, and have it processed by this code, then this code will detect it as qcow2 (despite it being raw) and honour the malicious header.

[Reply](#) [Quote](#) [Done](#)

Feb 27, 2019

Now, I do not try to get the image from qemu\_img\_info. I get it from image meta. And explicitly specify the disk format to avoid the 'insecure image format probing'.

[Reply](#) [Quote](#) [Done](#)

```

329     if fmt == "raw":
330         args = ['--pool', self.pool, base, name]
331         # Image format 2 supports cloning,
332         # in stable ceph rbd release default is not 2,
333         # we need to use it explicitly.
334         args += ['--image-format=2']
335         args += self.ceph_args()
336         processutils.execute('rbd', 'import', *args)

```

How useful do you find the above code review on a scale of 1 to 10, if you are the author?

```

148     # Pick a file name for when we upload the media to VIOS
149     file_name = pvm_util.sanitize_file_name_for_api(
150         instance.uuid.replace('-', ''), prefix='cfg_', suffix='.iso',
151         max_len=pvm_const.MaxLen.VOPT_NAME)
152
153     # Create and upload the media
154     iso_path = tempfile.mkstemp()[1]

```

Oct 15, 2018

Pretty sure we've left the file open here.

[Later] Yeah: <https://www.logilab.org/blogentry/17873>

Since we're Linux, we could get away with:

```

with tempfile.NamedTemporaryFile() as fh:
    self._create_cfg_dr_iso(..., fh.name, ...)
    vopt, f_uuid = tsk_stg.upload_vopt(..., fh, fh.name, os.path.getsize(fh.name))

```

The file deletes itself.

```

155     try:
156         self._create_cfg_dr_iso(instance, injected_files, network_info,
157                                 iso_path, admin_pass=admin_pass)
158

```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```

169         try:
170             existed.remove()
171         except exception.PciDeviceInvalidStatus as e:
172             LOG.warning("Unable to remove device with %(status)s "
173                         "ownership %(instance_uuid)s because of "
174                         "%(pci_exception)s.")

```

Feb 1, 2019

Need a space here.

```

175         "Check your [pci]passthrough_whitelist "
176         "configuration to make sure this allocated "

```

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you are the  
author?

```
6663 # Now that we updated the ProviderTree, we want to store it locally
6664 # so that spawn() or other methods can access it thru a getter
6665 self._provider_tree = copy.deepcopy(provider_tree)
```

Feb 14, 2019

And this also isn't bouncing on that lock, huh?

Need to get to the bottom of this.

[Later] Figured it out. `eventlet.monkey_patch` replaces `thread` with `eventlet.green.thread`. The former blows up when you try to copy it; the latter does not. And the latter is doing the right thing by creating a new semaphore. <http://paste.openstack.org/show/745119/>

Reply

Quote

Done

6666

How useful do you  
find the above code  
review on a scale of 1  
to 10, if you were the  
author?

Is there anything else you would like to add about this survey?

Thank you so much for your time. As an appreciation for your efforts, please include your email address, if you want to be included in the random drawing for Amazon gift card worth \$10 (We'll randomly select ten respondents).