在Nova创建VM时如果失败，可以在UI页面中看到下面的错信息。

故障

消息	No valid host was found. There are not enough hosts available.
编码	500
详情	File "/var/lib/kolla/venv/lib/python2.7/site-packages/nova/conductor/manager.py", line 866, in schedule_and_build_instances request_specs[0].to_legacy_filter_properties_dict()) File "/var/lib/kolla/venv/lib/python2.7/site-packages/nova/conductor/manager.py", line 597, in _schedule_instances hosts = self.scheduler_client.select_destinations(context, spec_obj) File "/var/lib/kolla/venv/lib/python2.7/site-packages/nova/scheduler/utils.py", line 371, in wrapped return func(*args, **kwargs) File "/var/lib/kolla/venv/lib/python2.7/site-packages/nova/scheduler/client/__init__.py", line 51, in select_destinations return self.queryclient.select_destinations(context, spec_obj) File "/var/lib/kolla/venv/lib/python2.7/site-packages/nova/scheduler/client/__init__.py", line 37, in __run_method return getattr(self.instance, __name)(*args, **kwargs) File "/var/lib/kolla/venv/lib/python2.7/site-packages/nova/scheduler/client/query.py", line 32, in select_destinations return self.scheduler_rpcapi.select_destinations(context, spec_obj) File "/var/lib/kolla/venv/lib/python2.7/site-packages/nova/scheduler/rpcapi.py", line 129, in select_destinations return cctxt.call(ctxt, 'select_destinations', **msg_args) File "/var/lib/kolla/venv/lib/python2.7/site-packages/oslo_messaging/rpc/client.py", line 169, in call retry=self.retry) File "/var/lib/kolla/venv/lib/python2.7/site-packages/oslo_messaging/transport.py", line 97, in _send timeout=timeout, retry=retry) File "/var/lib/kolla/venv/lib/python2.7/site-packages/oslo_messaging/_drivers/amqpdriver.py", line 458, in send retry=retry) File "/var/lib/kolla/venv/lib/python2.7/site-packages/oslo_messaging/_drivers/amqpdriver.py", line 449, in _send raise result
已创建	2017年6月9日 09:35

代码实现大致是这样的：

Nova在nova.compute.manager.ComputeManager类中为主要的操作（如创建虚机，迁移等）的入口函数添加了一个装饰器方法：

@wrap_instance_fault（nova/compute/manager.py）

```python
@utils.expects_func_args('instance')
def wrap_instance_fault(function):
    """Wraps a method to catch exceptions related to instances.

    This decorator wraps a method to catch any exceptions having to do with
    an instance that may get thrown. It then logs an instance fault in the db.
    """

    @functools.wraps(function)
    def decorated_function(self, context, *args, **kwargs):
        try:
            return function(self, context, *args, **kwargs)
        except exception.InstanceNotFound:
            raise
        except Exception as e:
            # NOTE(gtt): If argument 'instance' is in args rather than kwargs,
            # we will get a KeyError exception which will cover up the real
            # exception. So, we update kwargs with the values from args first.
            # then, we can get 'instance' from kwargs easily.
            kwargs.update(dict(zip(function.__code__.co_varnames[2:], args)))

            with excutils.save_and_reraise_exception():
                compute_utils.add_instance_fault_from_exc(context,
                                                          kwargs['instance'], e, sys.exc_info())

    return decorated_function
```

这个方法的主要作用是catch被装饰函数抛出的所有异常，存入数据库的instance_faults表中（compute/utils.py中的add_instance_fault_from_exc方法

created_at	2017-06-05 11:12:32
updated_at	
deleted_at	2017-06-05 11:13:24
id	1
instance_uuid	6ab87f05-0225-40b0-9fec-ea686648b994
code	500
message	Build of instance 6ab87f05-0225-40b0-9fec-ea686648b994 aborted: Volume resource quota exceeded

details	File "/opt/stack/nova/nova/compute/manager.py", line 1786, in _do_build_and_run_instance
	    filter_properties)
	File "/opt/stack/nova/nova/compute/manager.py", line 1968, in _build_and_run_instance
	    phase=fields.NotificationPhase.ERROR, exception=e)

host	localhost.localdomain
deleted	1

instance_faults表中的信息是可以被nova show命令查询到的。

目前看来，nova没有主动通知UI错误已经发生，而是nova把错误信息放到了nova show方法的返回值中。

horizon创建虚机时应当会不断的调用show命令，查询VM的状态，因此能看到错误。