

How to run nova-api via apache2:

Openstack by default runs keystone and horizon via apache2. Apache2 acts as a reverse proxy and forwards the requests to these services. Other services can also be run via apache2 using mod_wsgi.

[Andy Mc – OpenStack Ops](#) blog has details on how to setup different openstack services to run via apache2. The steps below are straight forward and can be helpful to the beginners.

Below are the steps to setup Nova API Compute to run via apache2. I used devstack and it already has apache setup.

1. Let us start with wsgi script for Nova API. You can find it in <https://github.com/openstack/nova/blob/master/nova/wsgi/>.

Copy the nova-api.py from the repo and add it to some location say /usr/locale/bin. Name it as nova-osapi if nova-api already exists in the directory.

Here is the wsgi file

```
"""WSGI script for Nova API
EXPERIMENTAL support script for running Nova API under Apache2 etc.
"""

from oslo_config import cfg
from oslo_log import log as logging
from paste import deploy

from nova import config
from nova import objects
from nova import service # noqa
from nova import utils

CONF = cfg.CONF

config_files = ['/etc/nova/api-paste.ini', '/etc/nova/nova.conf']
config.parse_args([], default_config_files=config_files)

LOG = logging.getLogger(__name__)
logging.setup(CONF, "nova")
utils.monkey_patch()
objects.register_all()

conf = config_files[0]
name = "osapi_compute"

options = deploy.appconfig('config:%s' % conf, name=name)

application = deploy.loadapp('config:%s' % conf, name=name)
```

2. Change the permissions of the file to 755 using:
sudo chmod 755 /usr/local/bin/nova-osapi

3. cd into /etc/apache2/sites-available

This directory already has keystone.conf and horizon.conf as these services are by default run via apache2 as mentioned previously.

4. Create a file nova-api.conf

```
Listen *:8774
<VirtualHost *:8774>
    WSGIScriptAlias / /usr/local/bin/nova-osapi
    WSGIDaemonProcess nova-osapi user=stack group=nogroup processes=3
    threads=10 python-path=/usr/share/pyshared/nova
    WSGIProcessGroup nova-osapi

    ErrorLog /var/log/apache2/osapi.log
    LogLevel debug
    CustomLog /var/log/apache2/osapi.log combined
    <Directory /usr/local/bin>
        <IfVersion >= 2.4>
            Require all granted
        </IfVersion>
        <IfVersion < 2.4>
            Order allow,deny
            Allow from all
        </IfVersion>
    </Directory>
</VirtualHost>
```

WSGIScriptAlias is the location of the wsgi file (in my case I copied the wsgi script in /usr/local/bin.

5. Enable the sites by linking the nova-api.conf in sites-enabled. sites-enabled manages which of your virtual hosts will actually be booted into Apache when it starts up.
6. cd into /etc/apache2/sites-enabled. Link nova-api.conf using:

```
ln -s ../sites-available/nova-api.conf nova-api.conf
```

7. You are done with your setup. Restart apache2 using
sudo service apache2 restart

If nova-api is already running, restarting apache2 on the same port throws an error. Kill the process that runs nova-api using kill -9 <<processid>> or in devstack kill nova-api service on screens. Restarting apache2 again should work now.