

Nebula Live Migration

We recently added fifteen new compute nodes to the NCSA Nebula (OpenStack) cluster. These nodes use a shared filesystem to store instances, so they all benefit from a feature called 'live migration.' Live migration allows us to instantly move instances from one compute node to another without any downtime, so your instances don't need to be shut down if hardware fails or other maintenance is necessary.

The old compute nodes only use local disk for instances, so they can't use live migration. Any maintenance or hardware failures stop the instances from running.

We would like to enable live migration on the old compute nodes, but to do this we first need to move any running instances off those machines. This means that instances will be down for an unspecified amount of time while being moved (the larger the image, the longer it will take), but it will probably run in under an hour. Once migrated we shouldn't ever have to shut down your instances again.

Please do not suspend your instances that are to be migrated as it interferes with the migration process.

If any of your instances are not needed, please terminate them.

If you do not need to save the current state of an instance and you can re-create it easily from a snapshot or image you can terminate it and re-create a new one yourself. Pausing then resuming or stopping and then restarting an instance will not cause it to move to a live migration node. Terminating it and recreating it will result in the new instance being on a live migration node.

If we are migrating your VM you can check its action log to tell when it has been migrated. The action log will have a couple of notes in it "migrate" and "confirm resize" after its migration is complete.