Mirantis OpenStack®
version 7.0
Release Notes
Release Notes for Mirantis OpenStack 7.0

Mirantis, Inc. is releasing Mirantis OpenStack version 7.0.

This generally available version of Mirantis OpenStack is based on Kilo release 2015.1.0 of OpenStack.

These release notes supplement the product documentation and list enhancements, resolved issues, and known issues in this version.

The following table lists the released revisions of this documentation:

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**What's New in Mirantis OpenStack**

Mirantis is pleased to make Mirantis OpenStack 7.0 available to our customers, partners, and the community. OpenStack core projects in Mirantis OpenStack 7.0 hardened packages support the OpenStack Kilo 2015.1.0 release; and Fuel 7.0 deploys this version of OpenStack on Ubuntu.

### Major components versions

| OpenStack integrated projects | Kilo release 2015.1.0:  
|                              | * Ceilometer (OpenStack Telemetry)  
|                              | * Cinder (OpenStack Block Storage)  
|                              | * Glance (OpenStack Image Service)  
|                              | * Heat (OpenStack Orchestration)  
|                              | * Horizon (OpenStack Dashboard)  
|                              | * Keystone (OpenStack Identity)  
|                              | * Neutron (OpenStack Networking)  
|                              | * Nova (OpenStack Compute)  
|                              | * Sahara (OpenStack Data Processing)  
|                              | * Swift (OpenStack Object Storage) |

| OpenStack related projects | Murano 2015.1.0 |

| Operating systems | CentOS 6.6 (x86_64 architecture only, master node only)  
|                   | Ubuntu 14.04 (x86_64 architecture only, OpenStack environment only) |

| Hypervisor | Ubuntu: KVM, **libvirt 1.2.9**; QEMU 2.0.0 (the latter is coming from upstream Ubuntu mirrors)  
|            | vCenter Server 5.5 Update 2 |

| Networking backend | Open vSwitch 2.3.1 |

| Other | Puppet 3.4.2  
|       | MCollective 2.3.3  
|       | Cobbler 2.4.4  
|       | HA Proxy 1.5.3  
|       | Galera 25.3.10  
|       | RabbitMQ 3.5.4  
|       | Pacemaker 1.1.12  
|       | Corosync 2.3.4  
|       | MongoDB 2.6.10  
|       | Ceph 0.80.9 Firefly  
|       | MySQL 5.6.23 (Ubuntu) |
Note

Deployment of Mirantis OpenStack 7.0 onto CentOS for host operating system is not supported due to incompatibility between CentOS 6.6 and OpenStack Kilo. Mirantis is actively working on updating support for CentOS-based deployments.

New Features Included in Mirantis OpenStack 7.0

**Fuel Master Node can be upgraded from 6.x to 7.0 GA**

If you are running a Mirantis OpenStack 6.x environment, you can upgrade your Fuel Master Node to Fuel 7.0. Fuel can manage environments that were deployed with 6.x releases, assuming that you created the environment with the earlier release and upgraded the Fuel Master node rather than doing a fresh install. For a list of OpenStack releases and versions that your Fuel Master node can manage, click on the "Releases" tab at the top of your Fuel home page.

See [Upgrade Fuel from Earlier Versions](#) for details.

Upgrading the Fuel Master Node does not update the OpenStack environment.

**Fuel Plugins**

- Previously, VIP reservation was based on network metadata. Now, VIP reservation is based on the network roles description, enabling a plugin developer to create extra VIPs to be used in developer’s deployment scripts. See more in [Virtual IP reservation via Fuel Plugin’s metadata](#) section of the Fuel Plugins SDK.

- After adding and enabling custom plugins for a cluster, you can now define a new role described in these plugins via Fuel Web UI as well as via [Fuel CLI](#). You can find more information in [Configuration of Fuel Plugins with new roles](#) section of the Fuel Plugins SDK.

- Fuel 7.0 enables you to separate the main services from the Controller role and deploy them on a custom role with a plugin. See [How to separate services from Controller with a plugin](#) for details.

- Sometimes, new functionality, minor updates, or security fixes should be delivered. Hence, a plugin developer creates a new version of a plugin. For more information on how Fuel plugin versioning works, see [Plugin versioning system](#) section of the Fuel Plugins SDK.

**Deployment with Ubuntu 14.04 bootstrap**

You can now deploy an OpenStack environment using the Ubuntu 14.04 bootstrap (the default bootstrap is CentOS 6.6). However, currently this functionality is suitable for experimental or testing purposes only. We do not recommend applying Ubuntu 14.04 bootstrap if you use bare-metal nodes on big OpenStack environments and/or if your deployment automation relies on a persistent naming of network interfaces during the deployment process.

Because Ubuntu 14.04 bootstrap uses asynchronous device initialization, the naming of devices (in particular, network interfaces) is not guaranteed to be persistent. If you re-install Ubuntu 14.04 bootstrap on the same node,
devices may randomly switch names, depending on what device boots first. This only affects bare-metal nodes, since NICs on virtual nodes have constant initialization time. LP1487044

If you deploy an environment that uses bare-metal nodes with Ubuntu 14.04 bootstrap, check each node and manually reassign the networks to the correct interfaces.

To enable the Ubuntu 14.04 bootstrap option, see the appropriate section in the Mirantis Operations guide.

Note

To build an Ubuntu based bootstrap image, the Fuel Master node must have an access to the Internet or at least access to the Ubuntu and Mirantis OpenStack mirrors. LP1486551

Nova-compute (VCDriver) service on a standalone node deployment

In earlier Fuel releases, nova-compute services that managed virtual machines in vSphere clusters through the vCenter server were deployed on Controller nodes only.

In Fuel 7.0, with the implementation of the Compute VMware node role, you are able to deploy a nova-compute service on a standalone host. This change introduces more flexibility to deployment scenarios.

See compute-vmware-role blueprint for the details about the implementation and Assign a role to a node server for the instructions on how to deploy nova-compute service on a standalone node through Fuel Web UI.

Neutron-related features

- Neutron Distributed Virtual Router (DVR). Neutron DVR significantly increases performance and eliminates a single point of failure. For more information, see Neutron with DVR.

- Networking options have been amended from VLAN and GRE to VLAN and tunneling. The default tunnel protocol has been changed to VXLAN. GRE tunneling is deprecated but still available from Fuel CLI.

Keystone-related features

- Fuel now deploys Keystone under Apache mod_wsgi as a server instead of a standalone eventlet service. This change improves Keystone service performance and OpenStack cloud scalability.

Signed packages and package repositories

All the .rpm and source .deb packages, as well as Ubuntu and CentOS repositories are now signed with GPG keys using GnuPG and RPM Package Signing tools.

Admin interface bonding

You can now bond an Admin interface in the “Configure Interfaces” screen of Fuel Web UI. See Setting NIC bonding (NIC aggregation).
Only authenticated Fuel users can download the diagnostic snapshot

Now only authenticated users can download the diagnostic snapshot.
See also the Snapshot download with authentication blueprint.

Configurable hostnames

You can define the hostnames of the slave nodes through Fuel Web UI or CLI prior to deploying an environment.

Note

Whereas you can change the node names at any time (before the deployment or after it), you can only change the hostnames before the deployment. Hostnames are locked after the deployment and there is no way to change them.

See Assign a role or roles to each node server.

Dashboard in the Fuel Web UI

The Dashboard tab in the Fuel Web UI is your go-to place to review all the necessary information about your OpenStack environment.
This is where you can delete or rename your environment, discard undeployed changes to an environment, start or stop the deployment, access documentation, and view possible errors reported by Fuel.

Jumbo frames support

With the Neutron network selected, the jumbo frames feature is now automatically enabled during the deployment process.
See Network service.

Custom labels for nodes

You can now add custom defined key pair labels (ex. Rack : 1) to nodes to help identify nodes or groups of nodes by custom characteristics.
See Add nodes to the environment.

Reduced footprint

With the reduced footprint feature you can spawn virtual machines on nodes.
This can be useful in the following scenarios (but not limited to them):

- Run a minimal two node cluster on a single physical machine.
- Put external services on the spawned virtual machines (e.g. a monitoring service).
- Run three controllers on virtual machines on three different physical machines.
See *Using the reduced footprint feature.*

**Rolling back a node to its original state**

You can now use the rollback feature to return a node to its original state (e.g. the state before the node failed). This can be used to revert changes during a failed upgrade or other node malfunction.

See *Rollback.*

**Selectable offloading modes**

You can now select offloading modes for physical interfaces. The number and the set of possible offloading types depends on the interfaces' hardware and the current kernel version.

Fuel automatically detects the offloading modes for any given physical interface, which you can edit through Fuel Web UI or Fuel CLI.

See *Select offloading modes.*

**SSL and secure access support**

There are now two secure access options that you can enable on the *Settings tab* of Fuel Web UI:

- You can switch on SSL for the Horizon dashboard and the OpenStack publicURL endpoints.
- HTTPS access to the Fuel Master node.

See *Switching on SSL and Secure Access.*

**Networking templates support**

You can now use networking templates. Templates allow for more flexible network configurations and provide you with the following abilities:

- Ability to create additional networks (e.g. an extra network for Swift) and delete networks.
- Have a specific set of network roles.
- Ability to create a network only if a relevant node role is present on the node.
- Ability to provide custom networking topologies (e.g. subinterface bonding).

See *Using Networking Templates.*

See also

For information about Issues and Blueprints for Mirantis OpenStack 7.0, see the *Fuel for OpenStack 7.0 Milestone* page.
Fuel Resolved and Known Issues

Resolved Issues

- Database growth no longer fills the root file system. LP1278964
- IP ranges can now be updated for management and storage networks. LP1365368
- Previously, if a user wanted to make a backup of an environment to a remote server, the authorization prompt appeared only after backing up all containers which could take about half an hour. And if a user did not enter the pass during the LoginGraceTime (the default value is 120 seconds), the connection was lost. Now the authorization prompt appears first, and a key-based authentication is used to copy the backup archive. LP1352369
- RabbitMQ now keeps users/vhosts/etc by default and restores it automatically by OCF script. LP1383258
- The mysql resource no longer becomes unmanaged by Pacemaker after termination. LP1388771
- The fuel2 env delete command, which is a command to delete an environment, no longer fails. LP1467510
- There is now a separate partition for /var/log/ on Controller nodes, which means the root partition will not run out of space. LP1394864
- Resetting and then redeploying an environment with customized Admin (PXE) network settings no longer fails. LP1455610
- Running network verification no longer fails on detecting tenant DHCP servers after adding nodes to an existing cloud. LP11463935
- Cloud deployment no longer fails if a process listens to the same port as the RabbitMQ used by Murano. LP1467024
- The kernel is configured to not use the serial console by default.
   
   In general, using a serial device as a kernel console incurs a substantial runtime overhead, especially if the kernel produces a lot of logs. This may result in a kernel lockup.

   However, using serial devices from userspace programs is safe. For example, running getty to enable logins via serial device should not cause any system wide problems. Moreover, the kernel serial console can be very useful when debugging the kernel, for example.

   To enable the serial console, add the console=ttys0 parameter to the kernel command line through:

   - Web UI for all the nodes in a cluster for a target operating system;
   - Cobbler Web UI or the dockerctl command for a bootstrap node.

   LP1493767

- You can now add multiple network ranges through Fuel CLI. For detailed instructions, see Add network ranges. LP1341026

- In earlier versions of Fuel, Fuel installation could fail with the following error message:

  "<class 'cobbler.cexceptions.CX'>: 'MAC address duplicated"
The failure to install Fuel occurred when a significant number of nodes were removed from Cobbler, but some remained in Cobbler. The reason of this issue is that Cobbler being not scalable by design stores all data in plain text files, and manipulates the files slowly.

The fix verifies that Cobbler does not contain any nodes with the same MAC address. Otherwise, Cobbler throws a MAC address duplication error. LP1491725

• The fix removes the default libvirt network due to possible conflicts with a VM subnetwork in a production cluster. LP1437410

• The fix repairs the subdomain resolving by adding the upstream DNS servers to dnsmasq.conf. LP1491583

• The OSTF test “Create user and authenticate with it to Horizon” could fail trying to authenticate to HTTPS Horizon. The issue is fixed by temporarily disabling the last step (10) from the test when using SSL for Horizon. LP1486056

**Known Issues**

• We highly recommend that you do not place Ceph OSD on controllers as it severely degrades the controller’s performance. Use separate storage nodes if you have enough hardware.

• Deployment will fail with a "Not enough IP addresses" error message if there is an insufficient number of IP addresses. Sample scenarios:
  
  • You enable the "Assign public network to all nodes" option and specify an insufficient range of IP addresses.
  
  • The number of available IP addresses is less than the number of Controllers plus two IP addresses.
  
  • There is a number of IP addresses reserved for plugins and hence cannot be used for the deployment. LP1487996

• The "virt" role deployment with VLAN tagged interface may fail with the "Deployment has failed. Method granular_deploy" message.

  As a workaround, upload a network template as described in Step 6 in the *Using the reduced footprint feature* section.

  LP1488617

• For the time being, the default Heat configuration for HA environments is set to False. It may lead to the Heat failures in destructive scenarios (when you power off some controllers, for example). LP1465840

  As a workaround, change the parameter to `rabbit_ha_queues=True` in the `/etc/heat/heat.conf` file. Once you change the Heat configuration files on all the controllers, restart all the Heat services on all the OpenStack controllers manually:

```
# service heat-api restart
# service heat-engine restart
# service heat-api-cfn restart
# service heat-api-cloudwatch restart
```
• Node reinstallation may break connection to a management Virtual IP (VIP) address. As a result, OpenStack services will fail on Controller nodes.

To work around the issue, switch the stop order of corosync/Pacemaker:

In `/etc/rc6.d, /etc/rc1.d, /etc/rc0.d` do the following:

```bash
rm K20pacemaker
```

And then:

```bash
ln -s ../init.d/pacemaker K00pacemaker
```

LP1492210

• An attempt to download a file via CLI with the `swift download` command may fail with an "Object GET failed" error message. LP1482888

• Default disk allocation may not use entire disk space. To prevent this, before deploying, check that you do not have unallocated disk space by going to “Nodes”, selecting a node and clicking “Configure Disks”. LP1490597

• Intel X710 CNA is not supported in the CentOS-based bootstrap. LP1445562

As a workaround, use the Ubuntu-based bootstrap for the i40e driver.

• Fuel setup menu does not support devices with serial interface. This means that you cannot change the default access credentials in the Fuel setup menu.

As a workaround, do the following:

1. Install Fuel from ISO as you normally would.
2. On the first reboot, boot with the `console=ttys0 1` option.
3. Modify the password manually. Alternatively, you can also start the networking service:

   ```bash
   /etc/init.d/networking start
   ```

And then start the setup menu where you can change the default credentials by running the following command on the Fuel Master node:

```bash
fuelmenu
```

LP1438658

• High Availability (HA) will fail if a node runs out of RAM and swap memory for various reasons. The workaround is to try migrating resources manually via `crm resource migrate`. If the migration attempt fails, restart the affected Controller node and try again. LP11422186

• Disk partitioning on controllers does not automatically reset back to the default state if a Glance backend is changed. LP1450100
• Fuel Master node deployment may fail due to a hanging yum process inside a Docker container. This can be caused by a corrupted Docker storage backend. If the container itself cannot be deleted via dockerctl delete $CONTAINERNAME due to an error, such as "Error response from daemon: Cannot destroy container fuel-core-7.0-keystone: Driver devicemapper failed to remove root filesystem 01b3d040dcd6eef87611548846e0c3ec53caa8c8520807d2479470d95a896784: Error running DeleteDevice dm_task_run failed", you should reinstall Fuel Master node and deploy again. LP1495403

• The Fuel Web UI progress bar does not include information on the plugin deployment progress. When the nodes are in the "Ready" status and the progress bar displays 100% completion, the actual plugin deployment may still be in progress. LP1443808

• There is a known issue when a Fuel 6.1 to Fail 7.0 upgrade fails. One of Keystone's ports fails to bind and the service fails to start when Fuel Upgrade reverts the environment back to 6.1. This issue can be worked around by waiting approximately 10 minutes and then verifying normal operation via dockerctl check all. Note that this impacts only users who attempt at 6.1 to 7.0 upgrade and the upgrade fails for some reason. LP1495933

• Sometimes, a RabbitMQ node cannot restart after a failover because of a hanging epmd process.

To solve the problem, proceed with the following:

1. if Murano is installed in your environment, stop its RabbitMQ by running:

   ```bash
   service rabbit-server-murano stop
   ```

2. find the epmd process's pid:

   ```bash
   px aux | grep epmd
   ```

3. kill this process:

   ```bash
   kill <epmd pid>
   ```

   If epmd does not finish, run:

   ```bash
   kill -s 9 <epmd pid>
   ```

4. if Murano is installed in your environment, start its RabbitMQ by running:

   ```bash
   service rabbit-server-murano start
   ```

After you perform the steps above, Pacemaker will successfully start the RabbitMQ node. LP1479422

• Each time you use the fuel client on Fuel Master node, the following warning message appears in console:

```
DEPRECATION WARNING: /etc/fuel/client/config.yaml exists and will be used as the source for settings. This behavior is deprecated. Please specify
```
the path to your custom settings file in the FUELCLIENT_CUSTOM_SETTINGS environment variable.

You can fix the issue manually by creating a custom configuration file and exporting the FUELCLIENT_CUSTOM_SETTINGS variable with the configuration file path. To do this, proceed with the following steps:

1. Remove the file with deprecated configurations by running:

   ```bash
   rm -rf /etc/fuel/client/config.yaml
   ```

2. Create a `custom.conf` file with the following content:

   ```text
   SERVER_ADDRESS: "10.20.0.2"
   SERVER_PORT: "8000"
   KEYSTONE_USER: "admin"
   KEYSTONE_PASS: "admin"
   KEYSTONE_PORT: "5000"
   ```

3. Export the FUELCLIENT_CUSTOM_SETTINGS variable:

   ```bash
   export FUELCLIENT_CUSTOM_SETTINGS="~/custom.conf"
   ```

   where `~/custom.conf` is the path to the new configuration file.

4. Optional. Add the export to your `.bashrc` file with by running:

   ```bash
   echo 'export FUELCLIENT_CUSTOM_SETTINGS="~/custom.conf"' >> ~/.bashrc
   ```

LP1458361.

- There are several packages that do not get updated during the Fuel upgrade process. On the Fuel Master node, run `yum -y update` to install Mirantis OpenStack 7.0 system packages. Note there are approximately 190 packages to update, and it will take several minutes to complete. You will need to restart your Fuel Master host in order to apply the kernel update. **LP1496762**

- The bootstrapped nodes from a deleted environment, which were not rebooted, can be recognized in a new environment. However, provisioning and deploying of these nodes fails due to the `mco_pass` mismatch. **LP1422819**

- If you create a custom repository called `rabbitmq`, it will not appear on nodes after you deploy an environment. Therefore, do not use the `rabbitmq` name for new repositories in Fuel UI. **LP1477903**

- If provisioning is failed on one of the nodes with the following error message:

  ```bash
  'mdadm: Cannot get exclusive access to /dev/mdXYZ: Perhaps a running process, mounted filesystem or active volume group?'
  ```
Then you can remove that md device manually:

1. Reboot the failed node into bootstrap again.
2. Check that the /dev/mdXYZ volume is still present.
3. Check that the /dev/mdXYZ volume is not mounted.
4. Check that the /dev/mdXYZ volume has not been added to any active volume group.
5. Remove it from the volume group. See https://www.centos.org/docs/5/html/Cluster_Logical_Volume_Manager/PV_remove.html
7. Re-deploy the node.

LP1456276

Do not use initialization service scripts for the services managed by Pacemaker. LP1427378

Mirantis OpenStack environments 6.1 or earlier do not support HTTPS connection to the Fuel Master node. By default, the HTTPS access is disabled and the corresponding value in the `/etc/fuel/astute.yaml` file is set to `false`. Do not change this value if your deployment includes Mirantis OpenStack environments that are older than version 7.0.

Example:

```yaml
SSL:
force_https: false
```

See also Switching on SSL and Secure Access and LP1497271.

Deleting Controller nodes while Swift is copying data may result in lost images.

Sample scenario:

1. You deploy an environment with Controller nodes.
2. You add new Controller nodes to the environment.
3. Swift starts copying data from the original Controller nodes to the new ones.
4. You immediately delete the original Controller nodes.
5. As a result, you have:
   - The initially deployed Controller nodes are deleted.
   - The new Controller nodes are incomplete, because Swift did not finish copying the data from the original Controller nodes.

Some of the images are lost.

Do not delete the original Controller nodes before Swift finishes copying the data successfully.

LP1498368
• Currently, if you make changes in an already created environment that can affect target images created by the image-based provisioning system (for example, changes in repositories list) after your environment resets, these changes may not be applied during a new deployment.

To solve the problem, manually remove a target image on Fuel Master node after an environment resets and before you redeploy it:

```
ENV_ID=1 find /var/www/nailgun/targetimages/ -name "env_${ENV_ID}_*" -delete
```

where ENV_ID is the ID of an OpenStack environment.

1485997

• Fuel starts listening for SSH connections during installation before you are presented with an option to change the default password.

This may present a compromise to your Fuel implementation if it is connected to the Internet during installation.

• With the Neutron DVR feature enabled, there are the following limitations:

  • The rate of VM creation should be less than 3 VMs per minute.
  
  • If the constant rate of VM creation is 3 VMs per minute, the cloud can handle the load for a minimum of 6 hours \(^1\). If the constant load persists over 6 hours, the cloud will experience intermittent issues which will affect the Control Plane API availability and operations.

The 3 VMs per minute generation rate is not a regular occurrence across the industry and is termed a "cloud storm load". For example, IBM QRadar, which is a cloud security system, treats the 5 VMs per 30 minutes generation rate as a severe offence \(^2\).

The actual rate numbers depend on the number of active users, number of tenants, and the type of activity patterns. In case of self-service usage of the cloud, when users initiate VM provisioning manually, the rate of VM creation is typically low and does not last long. If cloud API is used by automation for VM creation, the load on the cloud infrastructure should be carefully evaluated and throttled on the automation level.

1 Data obtained for 200 nodes configuration with VLAN+DVR.

2 See IBM QRadar security article.

• Some of the new features may not show up on the Fuel Web UI due to your browser’s cache.

To work around this, clear your browser’s cache.

LP1475310
Mirantis OpenStack Components Resolved and Known Issues

OpenStack Dashboard (Horizon)

Resolved issues

• An authenticated user may conduct a persistent XSS attack by setting a malicious metadata to a Glance image, a Nova flavor, or a Host Aggregate, and tricking an administrator to load the update metadata page. Once executed in a legitimate context, this attack may result in a privilege escalation. To fix this, the metadata is omitted and then is interpreted as JSON. LP1468744

Nova

Known issues

• Because the scheduler’s caching in environments with one controller may not function correctly, you may not be able to launch multiple identical instances and may receive the following error message:

"No valid host was found"

To fix the issue, restart nova-scheduler

```
# service nova-scheduler restart
```

LP1461537

Resolved issues

• The fix solves an issue with the lost tokens when one of the memcached servers, which holds them, is rebooted. Therefore, an admin token that neutronclient holds becomes invalid. In case of 401 HTTP errors, the token_endpoint.Token plugin used by Nova does not request a new token from Keystone. LP1486503

Neutron

Resolved issues

• In previous versions of Neutron, when the Open vSwitch (OVS) agent restarts, it results in brief connectivity interruption between VMs. New version of Neutron eliminates this issue. When the OVS agent restarts, it automatically re-creates the network flows and drops only the old ones. The drop_flows_on_start option is disabled by default to support graceful OVS agent restart. LP1383674, LP1483253

• The logging of Neutron agent heartbeats is now available to troubleshoot problems with a cluster if any. See LP1453978.
• A reload operation is added to Neutron L3 agent resource to prevent external connectivity interruption while disabling or enabling the agent (using pcs resource enable/disable p_neutron-*-agent). Also, the patch updates the DHCP agent resource to keep consistency. LP1464817

• Neutron now supports an automatic cleanup of empty L3/DHCP namespaces after you remove resources. This option is enabled by default. LP1458633

Known issues

• Instances' metadata on CentOS 6.6 cloud images with cloud-init 0.7.5 packages may be unset in Neutron environments. When an environment is deployed with one of the Neutron topologies and CentOS 6.6 cloud images are used, instances may be unreachable via SSH due to a cloud-init failure. It happens because users' keypairs and the rest of configuration data may not be set correctly. LP1406286

• When using DVR, if two VMs from the same tenant network are located on the same node, you may have issues when connecting from VM1 with no floating IP to VM2 using its floating IP. For example, the output of the ping command may contain fixed IP instead of floating IP addresses. Or you may not be able to connect through SSH from VM1 to VM2 using the floating IP address of VM2.

The workaround is to use fixed IP addresses when VMs are in the same tenant network and are located on the same node. LP1630242

OpenStack Orchestration (Heat)

Resolved issues

• If evaluation period is shorter than the instance starting time and repeat_actions is set to True, extra instances are created even when the cooldown is long enough. The fix prevents the creation of undesirable extra instances. LP1474332

Known issues

• The creation of a stack fails if you use a template with WaitCondition/WaitHandle resources that expect more than one signal notify. It happens because of concurrent transactions during the signals handling. Some signals rewrite the information about the ones that were already handled. Therefore, the statistics shows less signals than expected. LP1497273

Workaround is to add the sleep(1) command between the wc_notify --data-binary .. commands in the Heat template that you use to create a stack.
• If it takes more than one hour to process an action with a big Heat stack (for example, create, update, delete), the Keystone token expires and the action fails. LP1483841

Workaround is to manually increase the default value for the token expiration time:

1. Open the keystone.conf file.
2. Find a section [token] that by default has expiration = 3600.
3. Change the default value to 7200-14400 seconds depending on the operation you perform.

**OpenStack Block Storage (Cinder)**

*Resolved issues*

• If a connection to Ceph is hanging during a cluster deployment, it causes operational problems with the cluster. The patch fixes possible deadlock in Cinder threads during RBD calls. LP1459781

**OpenStack Block Storage (Swift)**

*Resolved issues*

• Swift .upstart scripts do not include instructions for tracking unexpected shutdowns of services. The fix adds a respawn stanza and sets the limit to 20 retries within 5 seconds as a reasonable value for such kind of services. LP1466101

**Application catalog (Murano)**

*Resolved issues*

• Now it is possible to deploy Murano when nova-network is selected as a networking solution in Fuel. LP1462341

• If you delete an environment that contains a package with an incorrect destroy method, Murano leaves some of the components and does not switch to the Deletion FAILURE status. It happens due to incorrect exceptions’ handling by Murano API. The patch treats the exception results as errors, therefore marking a deletion as failed. LP1461594
• A new option *Abandon Environment* is added to the Murano API. Therefore, now you can stop a deployment in case of an emergency or remove an environment that fails to deploy. This option is available on the *Environments* page, as well as through the Murano CLI. LP1442910

**Note**

If you abandon an environment, only artefacts from Murano database are deleted. You have to manually clean all the external resources (like Heat stack).

**Known issues**

• If you add a new application to an environment with a *Deploy FAILURE* status, such an application has the same status that the environment does (*Deploy FAILURE* instead of *Ready to deploy*, although you have not started to deploy this application yet). Once the deployment of environment is successful, the application changes its status to the correct one (*Ready*). LP1441246

• Due to a peculiarity of YAML format, expressions that contain a sequence with "::" (colon-space), as well as those that start with "[", "]" or a quotation mark (but are not JSON-compatible), cannot be parsed by the YAML parser. LP1495590

The workaround for the colon case is to split the expression like shown in the example below:

```yaml
$msg: 'Error: {0}'
$log.debug($msg, 'text')
```

The workaround for other cases is to surround an expression with parenthesis:

```yaml
$value: ([1, 2] * 3)
```

An alternate workaround that works for all the cases is to use an explicit YAML tag:

```yaml
!yaql "log.debug('Error: {0}' text)"
$value: !yaql "[1, 2] * 3"
```

• An environment deployment fails when a user token expires (one hour after login). LP1496397

Workaround:

1. Open the configuration files of all your Controller nodes.
2. Find the parameter `use_trusts = false` in the [engine] section.
3. Change the value for this parameter to `true` in the configuration files of all your Controller nodes.
4. Restart the `murano-api` and `murano-engine` services on all the Controller nodes.
• Murano does not free resources after redeployment. You can remove a component from the already deployed environment, but the resources associated with that component are not released unless the entire environment is deleted. LP1392351

• For each Murano application where host name is requested from a user, there is a requirement: the host name should be unique across the environment. This is not validated during the user-input phase, and if two applications use the identical instance name, the deployment either fails or leads to an unpredictable result. To avoid any undesirable consequences, please make sure you use unique names for instance names and instance name templates.

Similar rules may be applied to other entities as well. For example, application names must be unique. LP1452679

• Due to an incorrect DB schema, Murano does not deploy environments with dozens of applications configured. The description columns in session, environment, and environment-template tables have the TEXT data type that does not support long strings. LP1566306

Workaround:

1. Log in to one of the controller nodes.
2. Obtain MySQL connection credentials:

   ```
cat /etc/murano/murano.conf | grep mysql://
```

3. Using these credentials, connect to Murano DB.
4. Update the session, environment, and environment-template DB schemas using the following command template:

   ```
   ALTER TABLE `tbl_name` MODIFY description LONGTEXT NOT NULL;
   ```

5. Verify the updates are successfully applied:

   ```
   SHOW CREATE TABLE `tbl_name`;
   ```

Example (output is omitted):

```
# mysql --host=192.168.0.2 --user=murano --password=G5SBfgt6pMpyBJ79VEqyQhlr murano
mysql>
mysql> ALTER TABLE `session` MODIFY description LONGTEXT NOT NULL;
mysql> ALTER TABLE `environment` MODIFY description LONGTEXT NOT NULL;
mysql> ALTER TABLE `environment-template` MODIFY description LONGTEXT NOT NULL;
```
How to Obtain the Product

Mirantis OpenStack is distributed as a self-contained ISO. You can download the ISO in the Mirantis OpenStack download section on the Mirantis Portal. We have also created the Oracle VirtualBox scripts to enable quick and easy deployment of a multi-node OpenStack cloud for evaluation purposes; see QuickStart Guide.
Maintenance Updates

To check a list of available maintenance updates, see *Maintenance Updates for Mirantis OpenStack 7.0.*
Contact Support

You can contact support online, through email, or by phone. Instructions on how to use any of these contact options can be found through Mirantis Service Desk.

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