
OpenNebula.org

OpenNebula 4.4 Release Notes 4.4.1

OpenNebula Project

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ISSUES FIXED

OpenNebula 4.4.1 is a maintenance release that fixes bugs reported by the community after 4.4 was released. To see what's new in OpenNebula 4.4 Retina, refer to its *release notes*.

This release only includes bug fixes and it is a recommended update for everyone running any 3.x or 4.x version of OpenNebula. Several bugs related to different OpenNebula components were fixed, ranging from datastore drivers to logging messages, see below for a complete list.

- #2699: FILES in CONTEXT now accepts multiple lines
- #2689: Fix for wrong monitoring value being picked on hook on host error
- #2657: Fix VMM driver to send one action per host
- #2483: User proper vnc parameters for HVM XEN
- #2535: Set cdrom disk type in xen driver
- #2602: Fix DS name space on ESX
- #2601: Use ssh_public_key when updating a template
- #2544: Do not output error messages when inserting multiple monitoring values for the same time
- #2542: CDROM on ceph datastore now uses CEPH_HOST, CEPH_SECRET, CEPH_USER
- #2572: Configuration option for XML-RPC message size limit
- #2548: Set correct flag for pool retrieval
- #2541: Defaults 0 to monitor probes when error occur to prevent syntax errors
- #2535: Put quotes around role name in the instantiate extra template

UPGRADING FROM OPENNEBULA 4.4

Warning: If you are upgrading from any other previous version please refer to the information included in the *OpenNebula 4.4 Retina release notes*.

The migration from OpenNebula 4.4 is straightforward by just upgrading the database version using the following procedure.

2.1 Preparation

Before proceeding, make sure you don't have any VMs in a transient state (prolog, migr, epil, save). Wait until these VMs get to a final state (runn, suspended, stopped, done). Check the *Managing Virtual Machines guide* for more information on the VM life-cycle.

Stop OpenNebula and any other related services you may have running: EC2, OCCI, and Sunstone. As `oneadmin`, in the front-end:

```
$ sunstone-server stop
$ oneflow-server stop
$ econe-server stop
$ occi-server stop
$ one stop
```

2.2 Backup

Backup the configuration files located in `/etc/one`. You don't need to do a manual backup of your database, the `onedb` command will perform one automatically.

2.3 Installation

Follow the *Platform Notes* and the *Installation guide*, taking into account that you will already have configured the passwordless ssh access for `oneadmin`.

You can keep your current `oned.conf` as there are no changes between 4.4 and 4.4.1 in the file.

2.4 Database Upgrade

The database schema and contents are incompatible between versions. The OpenNebula daemon checks the existing DB version, and will fail to start if the version found is not the one expected, with the message ‘Database version mismatch’.

You can upgrade the existing DB with the ‘onedb’ command. You can specify any Sqlite or MySQL database. Check the *onedb reference* for more information.

Warning: Make sure at this point that OpenNebula is not running. If you installed from packages, the service may have been started automatically.

After you install the latest OpenNebula, and fix any possible conflicts in `oned.conf`, you can issue the ‘`onedb upgrade -v`’ command. The connection parameters have to be supplied with the command line options, see the *onedb manpage* for more information. Some examples:

```
$ onedb upgrade -v --sqlite /var/lib/one/one.db
```

```
$ onedb upgrade -v -S localhost -u oneadmin -p oneadmin -d opennebula
```

If everything goes well, you should get an output similar to this one:

```
$ onedb upgrade -v -u oneadmin -d opennebula
MySQL Password:
Version read:
4.0.1.1 : Database migrated from 3.8.0 to 4.2.0 (OpenNebula 4.2.0) by onedb command.
```

MySQL dump stored in `/var/lib/one/mysql_localhost_opennebula.sql`

Use ‘`onedb restore`’ or restore the DB using the `mysql` command:

```
mysql -u user -h server -P port db_name < backup_file
> Running migrator /usr/lib/one/ruby/onedb/4.2.0_to_4.3.80.rb
> Done

> Running migrator /usr/lib/one/ruby/onedb/4.3.80_to_4.3.85.rb
> Done

> Running migrator /usr/lib/one/ruby/onedb/4.3.85_to_4.3.90.rb
> Done

> Running migrator /usr/lib/one/ruby/onedb/4.3.90_to_4.4.0.rb
> Done
```

```
Database migrated from 4.2.0 to 4.4.0 (OpenNebula 4.4.0) by onedb command.
```

If you receive the message “ATTENTION: manual intervention required”, read the section *Manual Intervention Required* below.

Warning: Make sure you keep the backup file. If you face any issues, the `onedb` command can restore this backup, but it won’t downgrade databases to previous versions.

2.5 Check DB Consistency

After the upgrade is completed, you should run the command `onedb fsck`.

Then execute the following command:

```
$ onedb fsck -S localhost -u oneadmin -p oneadmin -d opennebula
MySQL dump stored in /var/lib/one/mysql_localhost_opennebula.sql
Use 'onedb restore' or restore the DB using the mysql command:
mysql -u user -h server -P port db_name < backup_file
```

```
Total errors found: 0
```

2.6 Testing

OpenNebula will continue the monitoring and management of your previous Hosts and VMs.

As a measure of caution, look for any error messages in oned.log, and check that all drivers are loaded successfully. After that, keep an eye on oned.log while you issue the onevm, onevnet, oneimage, oneuser, onehost **list** commands. Try also using the **show** subcommand for some resources.

2.7 Restoring the Previous Version

If for any reason you need to restore your previous OpenNebula, follow these steps:

- With OpenNebula 4.4.1 still installed, restore the DB backup using 'onedb restore -f'
- Uninstall OpenNebula 4.4.1, and install again 4.4.
- Copy back the backup of /etc/one you did to restore your configuration.

2.8 Known Issues

If the MySQL database password contains special characters, such as @ or #, the onedb command will fail to connect to it.

The workaround is to temporarily change the oneadmin's password to an ASCII string. The `set password` statement can be used for this:

```
$ mysql -u oneadmin -p
mysql> SET PASSWORD = PASSWORD('newpass');
```

2.9 Manual Intervention Required

If you have a datastore configured to use a tm driver not included in the OpenNebula distribution, the onedb upgrade command will show you this message:

```
ATTENTION: manual intervention required
```

```
The Datastore <id> <name> is using the
custom TM MAD '<tm_mad>'. You will need to define new
configuration parameters in oned.conf for this driver, see
http://opennebula.org/documentation:rel4.4:upgrade
```

In OpenNebula 4.4.1, each tm_mad driver has a TM_MAD_CONF section in oned.conf. If you developed the driver, it should be fairly easy to define the required information looking at the existing ones:

```
# The configuration for each driver is defined in TM_MAD_CONF. These
# values are used when creating a new datastore and should not be modified
# since they define the datastore behaviour.
#   name      : name of the transfer driver, listed in the -d option of the
#               TM_MAD section
#   ln_target : determines how the persistent images will be cloned when
#               a new VM is instantiated.
#               NONE: The image will be linked and no more storage capacity will be used
#               SELF: The image will be cloned in the Images datastore
#               SYSTEM: The image will be cloned in the System datastore
#   clone_target : determines how the non persistent images will be
#               cloned when a new VM is instantiated.
#               NONE: The image will be linked and no more storage capacity will be used
#               SELF: The image will be cloned in the Images datastore
#               SYSTEM: The image will be cloned in the System datastore
#   shared    : determines if the storage holding the system datastore is shared
#               among the different hosts or not. Valid values: "yes" or "no"

TM_MAD_CONF = [
  name      = "lvm",
  ln_target = "NONE",
  clone_target= "SELF",
  shared    = "yes"
]
```

KNOWN ISSUES

The following bugs or issues have been identified in the current 4.4.1 version, and will be solved in future releases.

3.1 VMware

- No multi boot support

3.2 Drivers - Auth

- #823: X509 auth driver should check errors when encrypting

An exception is returned if the data to be encrypted is too large for that key size.

```
OpenSSL::PKey::RSAError - data too large for key size:  
/srv/cloud/one/lib/ruby/x509_auth.rb:178:in `private_encrypt'
```

3.3 Drivers - Network

- #2267: Reapply network driver actions after resume. OpenVSwitch tags are not reapplied upon VM resume.

3.4 Drivers - VM

- #2511: EC2 Tags are not correctly formatted before sending them to EC2

3.5 OneGate

- #2527: after VM delete-recreate onegate token is not valid

3.6 Packaging

- #2482: After 4.4 Upgrade, Sunstone may not display information in various views

3.7 Sunstone

- #2522: Uploading files from passenger needs a fix (workaround in ticket description)
- #2292: sunstone novnc send ctrl-alt-del not working in Firefox
- #2246: OneFlow Update wizard: reset button discards the resource, and shows a create dialog
- #1877: If syslog is enabled, the logs tab in the VM detailed view are not populated

You can see all tickets in our development portal: dev.opennebula.org.