

Cloudify 4.1

Release Notes

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What's New?

Cloudify Manager

- You can now explicitly specify whether plugins are to be installed from source during deployment creation.
- You can use the [teardown](#) command in the command line interface to remove Cloudify Manager and all its resources from a VM.
- Cloudify Manager no longer requires a root user for its operation.
- You can [specify resources as private](#) to increase isolation within tenants.
- To enhance multi tenancy isolation and boundaries, agents belonging to one tenant cannot trigger operations on another tenant. Achieved through RabbitMQ isolation between tenants.

Web User Interface

- You can now create your own custom widgets to assist you in displaying your data in a custom manner, or can integrate the Cloudify UI with other components in your architecture.

Widgets can be written using two different methods.

- Using the React Utility is the recommended method, and requires a build operation to be executed. You can build the `widget.js` file yourself, or use the Cloudify build system.
- Pure Vanilla JavaScript which enables attachment of an HTML template file. The callbacks for this method are described later in this topic.
- A custom widget environment is now available on which you can develop and test your widgets.

Cloudify Composer

- Cloudify Composer is now integrated into Cloudify Manager, eliminating the need for separate installation and making the process of uploading composed blueprints to the Manager easy and intuitive.

Upgrading to Cloudify 4.1

To upgrade from Cloudify 4.0.x to Cloudify 4.1, you must create a snapshot of your 4.0.x machine, and upload it to a tenant on Cloudify 4.1.0. Before you start, it is important that you [review the upgrade options](#). Note also that snapshots can only be restored to clusters that have only a single node.

Note:

Before beginning the upgrade process, please review the [Known Issues](#) section at the end of these release notes.

- Restoration using the CLI is described [here](#).
- Restoration from the UI is described [here](#).

Migration Procedure

If you are migrating **from Cloudify 3.4.x to Cloudify 4.1**, follow this procedure to perform the migration.

PREREQUISITE

Before taking the snapshot, verify that there are not any instances of node ID or deployment ID that include an underscore. For example, change `node_ID` to `node-ID`.

1. Take a snapshot of Cloudify 3.4.x according to the [installation instructions](#) in the Cloudify 3.4.x documentation.
2. Install Cloudify 4.1.0 according to the [installation instructions](#) in the Cloudify 4.1.0 documentation.
3. On the newly installed manager, upload and restore the 3.4.x snapshot.
You can restore a snapshot to a Manager that does not have any data on it (clean), or to one with existing content.

Note: The snapshot is uploaded to the tenant on which you performed the upload operation.

Restore the uploaded snapshot into a specific tenant by specifying a new (unique) tenant name. The tenant is created as part of the restore process, and is populated with the snapshot content.

- Restoration using the CLI is described [here](#).
- Restoration from the UI is described [here](#).

New Features

The following new features are available in this release:

Cloudify Manager

- [CFY-6876](#) - To enhance multi tenancy isolation and boundaries, agents belonging to one tenant cannot trigger operations on another tenant.
- [CFY-6900](#) - Snapshots from versions 3.4 and later can now be restored to newer versions of Cloudify.
- [CFY-6474](#) - You can now explicitly specify whether plugins should be installed from source on deployment creation.
- [CFY-6870](#) - When a snapshot that includes live agents is restored, the certificates are replaced, to enable communication with pre-existing agents.
- [CFY-6899](#) - When you restore a snapshot with a certificate, the VM is automatically rebooted, unless the `no_reboot` flag was supplied.
- [CFY-7017](#) - Validation of the minimal available memory can now be configured or disabled.

Cloudify Manager User Interface

- [CFY-6931](#) - Changes made using the Manager UI that are related to custom widgets and images are saved in snapshots, and therefore reflected in an upgraded Manager.
- [CFY-6908](#) – User interface files, such as widgets and images are saved in HA replication and snapshots.
- [STAGE-32](#) – A custom widget environment is now available.
- [STAGE-126](#) - You can now select the main blueprint file from a list during the upload process.

Security

- [STAGE-237](#) – Blueprints and deployments can be defined as private so they are only available to the user who created the resource.
- Cloudify Manager no longer requires a root user for its operation.
- Resources can be defined as private for further isolation within tenants.
- [CFY-6876](#) - To enhance multi tenancy isolation and boundaries, agents belonging to one tenant cannot trigger operations on another tenant. Achieved through RabbitMQ isolation between tenants.

CLI

- [CFY-6722](#) - Multiple local profiles are supported by default.

Cloudify Composer

- [COMPOSER-731](#) - Cloudify Composer is now integrated into the Cloudify Manager, eliminating the need for separate installation and making the process of uploading composed blueprints to the Manager easy and intuitive.

API

- [CFY-6474](#) - You can now explicitly specify whether plugins should be installed from source on deployment creation.

Issues Addressed

The following known issues have been addressed in this release:

Bootstrapping/Installation

- [CFY-6948](#) - When enabling SSL on bootstrap, `CLOUDIFY_SSL_TRUST_ALL` is no longer ignored for CLI commands.
- [CFY-6901](#), [CFY-6894](#), [CFY-6934](#) - The issue in which you could not bootstrap a second Manager on a cluster, or add an existing second Manager to a cluster, has been addressed.

CLI

- [CFY-6934](#) - ``cfy profiles use`` breaks without `--rest-port`.
- [CFY-6930](#) - The issue in which you could not rejoin a cluster using the CLI has been addressed.

Orchestration

- [CFY-6869](#) - Migration file created with `drop_index`
- [CFY-6874](#) - The issue in which the `get_property` intrinsic function did not look inside data types when `address` is of a declared type, has been addressed.
- [CFY-6933](#) - The issue in which a small number (~30) of deployments could not be created simultaneously has been addressed.

Cloudify Composer

- [COMPOSER-506](#) - The issue in which changes to a custom node type were not reflected in an already existing instance of that type is now resolved.
- [COMPOSER-598](#) - The issue in which, when renaming floating IP/security group names, the new node names were not updated in attached compute network section, is now resolved.
- [COMPOSER-602](#) - An autosave indicator has been added.
- [COMPOSER-626](#) - Container type instances are now able to reside inside a compute node type.
- [COMPOSER-659](#) - Composer now prevents the addition of a group as a member of itself.
- [COMPOSER-706](#) - The issue in which changes to derived properties of custom types were not being saved is now resolved.
- [COMPOSER-710](#) - The issue in which changes to a custom node's operations that are derived from a parent node was not saved is now resolved.
- [COMPOSER-747](#) - The issue in which an input or a custom relationship's property that was defined with a default Boolean value of "false" was saved with a "true" value, is now resolved.
- [COMPOSER-709](#) - Custom nodes that derive from a node type defined in an imported file are now deleted when that import is removed from the blueprint.

API

- [CFY-6898](#) - The `get version` API call now returns the correct edition value.

General

- [CFY-6864](#) - The issue in which a cluster comprising a single node could not be restored has been resolved.
- [CFY-6867](#) - The issue in which the cluster `start` command did not work has been resolved.
- [CFY-6914](#) - The create and restore snapshot commands are now working correctly.
- [CFY-6913](#) - The issue in which a snapshot of a Cloudify 3.4 instance that was restored to Cloudify 4.0.1 reported success but was not successfully restored has been addressed.
- [CFY-6652](#) - The timestamp in logs has been changed system time.

- [CFY-6962](#) - The issue in which a Diamond plugin did not use the correct configuration following a restart has been addressed.
- [CFY-6954](#) - The issue in which when upgrading an agent, the Diamond plugin service file was not updated to point to the new agent has been addressed.
- [CFY-6942](#) - When SSL is enabled on the Manager, the issue in which, in some circumstances, traffic was not redirected internally from port 80 to 443 has been addressed.
- [CFY-6932](#) - Handle restore snap with plugins to 4.0.1 (script)

Known Issues

The following issues are known to exist in this release:

Upgrading Cloudify Manager

- SSH key files on tenants other than the default tenant are not included in the snapshot creation and restoration process. It is recommended that you [use secrets](#) to store this data, ensuring a proper upgrade.
Workaround: When you are creating your snapshot of Cloudify Manager 4.x, you can pass the `-exclude-credentials` flag. This prevents the store/retrieve process from being touched. You can then recreate the keys from the original Cloudify Manager in the same locations on the new Cloudify Manager.
- An agent upgrade is not automatically performed on tenants, other than the default tenant.
Workaround: To upgrade the agent on a tenant other than the default, run

```
cfy agents install -t TENANT_NAME
```
- Before taking a snapshot of a Cloudify Manager version 4.0.x, it is important that you run the process described in the documentation including tearing down existing Manager. During the process, essential patches are applied.

High Availability

- [CFY-7039](#) – If, when you start a cluster user the floating IP of a Manager(default), the required ports are not open, an error message is not displayed. It will appear that the cluster has started correctly.
Workaround: After you have started a cluster, view the Nodes list and verify that the node is online and does not have a `FAILED DB` status.

- [CFY-7030](#) – If you start a cluster with a single Manager instance, and that Manager becomes unavailable, when you attempt to connect a new (second) Manager to the cluster, an error message is returned that there is no active node in the cluster.
Workaround: Address the issues that made the Manager unavailable. You can now connect to the original second Manager.
- [CFY-6906](#) – This issue relates to the situation in which you have created a cluster from an image and you are joining a second Manager, which was bootstrapped to the cluster. When you join the second Manager to the cluster and run `cfy --version`, the version list *incorrectly* shows that you are connect to the bootstrapped (passive) Manager. If you run `cfy cluster node list`, the list *correctly* shows the active Manager as being active and that you are connected to it.
- [CFY-6868](#) – This issue occurs when upgrading from an earlier version to a later version. If you bootstrap a Manager and start a cluster, then tear down the Manager, and bootstrap a new Manager, when you attempt to start a cluster on the new Manager, an error message is returned.
- [CFY-6859](#) – If you have a cluster of two Cloudify Manager instances and you remove the active Manager, when you join a third Manager to the cluster (of which the second instance is now the active Manager), an internal server error is returned.
- [CFY-6813](#) – This issue relates to the situation in which you have created a cluster and have then torn down that active Manager. If you use the CLI to switch back to a profile that includes the recently torn down Manager, you erroneously receive a message that the Manager cannot be used because there is no active node in the cluster.
- [CFY-6822](#) – This issue relates to the situation in which you have two Managers in a cluster. If you remove the passive Manager from the cluster, and then remove the active Manager, you can still upload a blueprint and create resources on what was the active Manager, even though it is now outside of the cluster. If you attempt to start a new cluster with this Manager, or to join it to another cluster, an error message is returned

informing you that the Manager is already part of a cluster, even though the cluster node list is empty.

- [CFY-7019](#) – When you are uploading a plugin to a Manager in a cluster, instead of the plugin upload confirmation message, you erroneously get a message that there was a timeout in the process.
- [CFY-6821](#) – You can join a Manager that already has resources (users, tenants, or plugins) on it to a cluster and set it as the active Manager, although a Manager should be clean before it can be joined to a cluster.

Cloudify Composer

- In the blueprints catalog on the **Imports** tab, the default `types.yaml` file is located in the `http://www.getcloudify.org/spec/cloudify/4.1m2/types.yaml` directory. There are no changes to the functionality of the YAML file.
- In the out-of-the-box catalog, the OpenStack plugin is not included. You can add it by clicking **Import** and entering the link to the appropriate plugin. To identify the correct link, open the [Cloudify downloads page](#).
- You cannot add an output using Cloudify Composer. Open the blueprint in a text editor and add the output directly in the blueprint.