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Upgrading from PCM 1.2 to PCM 2.0.1

Product: Platform Cluster Manager (PCM)
 Version: 2.0.1 Dell™ Edition
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About this document

This guide describes how to upgrade Platform Cluster Manager Version 1.2 to Platform Cluster Manager Version 2.0.1.

The upgrade process requires the reinstallation of the cluster installer node and the reprovisioning of the compute nodes. Before reinstallation, you must capture the cluster configuration and generate the cluster configuration as a configuration report in a tar-gzipped file.

Prepare to upgrade

Before upgrading Platform Cluster Manager (PCM), perform these general steps:

1. Prepare for the installation of PCM 2.0.1, refer to the PCM 2.0.1 installation guide “Prepare to install” section.
2. Prepare an external device to store the upgrade information tar-gzipped file (e.g., a USB drive).
3. Download `kusu-migrate-2.0-1.noarch.rpm` from <http://my.platform.com>.
4. Read the following sections in this document before upgrading,
 - “Notes: for Platform Lava users”
 - “Notes: for Platform LSF users”
 - “General notes about Platform Cluster Manager version 2.0”

Notes: Dell kit

Note that the Dell kit cannot be upgraded.

You need to remove the Dell kit from PCM 1.2b before the update. Once the update is completed, add the new Dell kit from PCM 2.0.1 Dell Edition media.

Begin PCM upgrade

PCM upgrade requires reinstalling PCM 2.0.1 on the cluster installer node and reprovisioning the compute nodes. You must capture the configuration of PCM 1.2 before reinstalling the installer node.

To capture PCM 1.2 configuration:

1. Install `kusu-migrate-2.0-1.noarch.rpm` on the cluster installer node.
2. Run the command:

```
# kusu-migrate -e
```

See the `kusu-migrate` man page for more information about this tool.

A tar-gzipped file named `pcm1.2-migration-<date>-<time>.tgz` is generated in the current working directory.

3. Copy the tar-gzipped file to an external device.

Install PCM 2.0.1

See the PCM 2.0.1 installation guide for details.

Import PCM 1.2 settings to PCM 2.0.1

Prerequisite: PCM 2.0.1 is installed successfully.

Follow these steps to import PCM 1.2 settings to PCM 2.0.1:

1. (Optional) Install Platform Lava or Platform LSF on the installer node.
2. Copy the pcm1.2_migration-<date>-<time>.tgz file to the installer node.
3. Run the command:

```
# kusu-migrate -i -t pcm1.2_migration-<date>-<time>.tgz
```

See the kusu-migrate man page for more information on this tool.

4. Go to the directory /depot/kusu-migrate/ to retrieve the configuration files captured from PCM 1.2.

Provision compute nodes in PCM 2.0.1

After installing PCM 2.0.1 on the installer node, you must reprovision the compute nodes in the cluster.

1. Make sure that the compute nodes are physically connected to the installer node to the same provision network.
2. Log to on the installer node as root and run the command:

```
# kusu-addhost
```
3. Select a PCM 2.0.1 node group.
4. Select the provision network interface that is connected to the compute nodes.
5. Enter a rack number (Note: the host name for the compute node will be changed if a different rack number is used.)
6. Select “Next” to proceed to the screen where kusu-addhost is listening on the network.
7. Go to the compute node and start the boot process.

If the compute node is not configured to PXE boot, modify the boot order in BIOS.

The installation of the compute node starts. The compute node host name appears on the kusu-addhost screen.

You can also use the mac files in the /depot/kusu-migrate/mac_files/ directory to provision the compute nodes. This option reuses the same compute node names from the old cluster configuration based on compute node MAC addresses. For more information, see the kusu-addhost man page and the “Mac files for node groups” section in this document.

Note: Provisioning compute nodes in PCM 2.0.1 for:

- Repurposing nodes which previously had Windows
- Repurposing nodes which previously had been provisioned by older versions of PCM (such as PCM 1.2).

These conditions may cause provisioning to fail as it may run out of disk space. The original boot loader is not modified and the only way to get to the newly provisioned compute node is to manually run fdisk for deleted the partitions of old nodes.

PCM 1.2 configuration

The following is the complete list of the configuration files that are captured from PCM 1.2 and imported to the directory `/depot/kusu-migrate/` in PCM 2.0.1. Any other configurations that are not included in the list below are not be captured:

- Database
- Custom and post scripts files
- Custom RPM packages
- Mac files for each node group on PCM 1.2 with the nodes' mac address, IP address and host name.
- PCM 1.2 configuration report
- Configuration for Platform Lava kit, if any
- Configuration and license for Platform LSF kit, if any

Database

The database in PCM 1.2 is captured and saved as the file `kusudb_copy.db` in the directory `/depot/kusu-migrate/`.

To retrieve the information from this file, run the command:

```
# sqlite3 /depot/kusu-migrate/kusudb_copy.db
```

To see all the tables in the database, run the command:

```
# .table
```

To see all the entries in a table (e.g., node groups table), run the command:

```
# select * from node groups;
```

Custom scripts

The custom scripts in PCM 1.2 are located in the directory `/depot/kusu-migrate/depot/repos/custom_scripts/` of PCM 2.0.1. You can copy the script files in this directory to `/depot/repos/custom_scripts/`.

To add a custom script in PCM 2.0.1, follow the steps listed:

1. Run the command:

```
# kusu-ngedit
```

2. Select a node group to edit.

3. Select 'Next' to proceed to the "Custom Scripts" screen.
4. Enter the location of the script in the 'New Script' field. For example, `"/depot/repos/custom_scripts/<script>"`
5. Select 'Add'.

The custom script is added to the node group.

Post scripts

The post scripts in PCM 1.2 are located in the directory `/depot/kusu-migrate/depot/repos/post_scripts/` of PCM 2.0.1. You can copy the script files in this directory to `/depot/repos/post_scripts/`.

Custom RPM packages

The custom RPM packages in PCM 1.2 are located in the directory `/depot/kusu-migrate/depot/contrib/` of PCM 2.0.1. You can copy the RPM packages in this directory to `/depot/contrib/`.

Mac files for node groups

A mac file for each node group in PCM 1.2 is located in the directory `/depot/kusu-migrate/mac_files/` of PCM 2.0.1. Note that only the node groups containing compute nodes in PCM 1.2 have a mac file in this directory. The mac files are named according to the node group names.

These mac files contain the mac address, IP address, and host name of the compute nodes in the node group.

The mac files may be used to reprovision the compute nodes for PCM 2.0.1. See the `kusu-addhost` man page for more information.

PCM 1.2 configuration report

The configuration report of PCM 1.2 are located in the path `/depot/kusu-migrate/pcm1.2_migration_report-<date>-<time>` of PCM 2.0.1.

To view the report file, run the command:

```
# vim /depot/kusu-migrate/pcm1.2_migration_report-<date>-<time>
```

You can also view the report file from the tar-gzipped file with the following command:

```
# kusu-migrate -r -t pcm1.2_migration-<date>-<time>.tgz
```

The report file contains following information:

1. List of network settings in PCM 1.2
2. List of kits installed on PCM 1.2

3. List of repositories created on PCM 1.2
4. List of node groups on PCM 1.2 including the repository that each node group is associated with and the compute nodes information inside each node group.
5. List of custom rpm packages in PCM 1.2
6. Lists of custom scripts in PCM 1.2
7. List of post scripts in PCM 1.2

Configuration for Platform Lava kit

Refer to the section “Notes for Platform Lava users” in this document

Configuration for Platform LSF kit

Refer to the section “Notes for Platform LSF users” in this document

Configure PCM 2.0.1

To configure PCM 2.0.1, refer to the PCM 1.2 configuration report. The Platform Cluster Manager Version 2.0 User Guide will contain more information on how to configure PCM 2.0.1.

Network settings

To create new networks or modify the existing network settings on PCM 2.0.1, make use of the network tools, kusu-netedit and kusu-net-tool. Refer to the kusu-netedit man page and the kusu-net-tool man page for more information.

Kits installation

Refer to the list of kits in the PCM 1.2 configuration report to install new kits on PCM 2.0.1.

Make use of the kit management tool, kusu-kitops. Refer to the kusu-kitops man page for more information.

Note: refer to the section “General notes about Platform Cluster Manager version 2.0” in this document regarding the kits that are not supported in PCM 2.0.1.

Repositories

Refer to the list of repositories in the PCM 1.2 configuration report to create the same repositories on PCM 2.0.1 and associate the corresponding kits to each repository.

Make use of the repository management tool, kusu-repoman. Refer to the kusu-repoman man page for more information.

Note: refer to the section “General notes about Platform Cluster Manager version 2.0” in this document regarding the kits that are replaced in PCM 2.0.1.

Node groups

Refer to the list of node groups in the PCM 1.2 configuration report to create the same node groups on PCM 2.0.1. Set the repository and networks to each node group as indicated in the report. Associate the kit component to each node group as per the report indicated.

It is recommended to make use of the node group properties manipulation tool: kusu-ngedit. Refer to the kusu-ngedit man page for more information.

Notes: for Platform Lava users

Platform Lava is not supported together with Platform LSF in PCM 2.0.1. Platform Lava must be disabled to install Platform LSF in PCM 2.0.1.

The configuration for Platform Lava in PCM 1.2 will be backed up and imported during upgrade.

Note the following issues when importing Platform Lava configuration:

1. The IP address and host name of the PCM 2.0.1 installer node must be the same as the PCM 1.2 installer node for the configuration to migrate successfully.
2. Platform Lava must be installed on PCM 2.0.1 before the upgrade process for the configuration files to be imported.
3. Install other kits only after upgrading.
4. If Platform Lava is not installed before upgrading, go to the `/depot/kusu-migrate/etc/lava/conf/` directory after upgrading to retrieve the configuration files for Platform Lava.

Refer to the Platform Lava kit document and related documentation for information on how to enable Platform Lava administrator and to submit Lava jobs.

Notes: for Platform LSF users

Platform LSF is not supported together with Platform Lava in PCM 2.0.1. Platform Lava must be disabled to install Platform LSF in PCM 2.0.1.

The configuration and license for Platform LSF in PCM 1.2 will be backed up and imported during the upgrade process.

Note the following issues when importing Platform LSF configuration and license:

1. The IP address and host name of the PCM 2.0.1 installer node must be the same as the PCM 1.2 installer node for the configuration to migrate successfully.
2. Platform LSF must be installed on PCM 2.0.1 before the upgrade process for the configuration files and license to be imported.
3. Install other kits only after upgrading.
4. If Platform LSF is not installed before upgrading, go to the `/depot/kusu-migrate/etc/templates/lsf/` directory after upgrading to retrieve the configuration files for Platform LSF.

The license for Platform LSF in PCM 1.2 will be backed up and imported during the upgrade process. If more than one LSF cluster is supported on PCM 1.2, the licenses for each cluster are not imported automatically. Go to the `/depot/kusu-migrate/opt/lsf/conf/` directory after upgrading to retrieve the license files for Platform LSF.

To create an LSF master in a compute node on PCM 2.0.1, follow these steps:

1. Run the command:

```
# kusu-ngedit
```

2. Select 'lsf-master-candidate' node group to edit.
3. Select 'Next' to proceed to the "Components" screen.
4. Select lsf-> component-LSF-Master-v7_0_6
5. Select 'Next to proceed to "Summary of Changes" screen.
6. Select "Accept".
7. At "kusu-cfmsync Update" screen, select 'Yes' if a compute node is already in the 'lsf-master-candidate' node group.
8. Run the command:
9. # kusu-addhost
10. Select 'lsf-master-candidate' node group.
11. Provision a compute node in the 'lsf-master-candidate' node group.

The compute node is now an LSF master node.

Refer to the Platform LSF kit document and related documentation for information on how to create LSF clusters and generate LSF configuration.

General notes about Platform Cluster Manager Version 2.0.1

The following kits are no longer supported in Platform Cluster Manager version 2.0.1. No configuration information for these kits will be captured during migration.

- Cacti kit
- Ganglia kit
- Ntop kit

The above kits will be replaced by Platform RTM kit in Platform Cluster Manager version 2.0. Refer to the Platform RTM kit documentation for more information.

Technical Support

Contact Platform Computing or your PCM vendor for technical support. Use one of the following to contact Platform technical support:

Web Portal eSupport

You can take advantage of our web-based self-support available 24 hours per day, 7 days a week ("24x7") by visiting <http://my.platform.com>. The Platform eSupport and Support Knowledgebase site enables you to search for solutions, submit your support request, update your request, enquire about your request, as well as download product manuals, binaries and patches.

Email Support

support@platform.com

Telephone Support

View contact information available at <http://www.platform.com/services/support>.

North America: +1 905 948 4297

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