

# Manage Firmware and Driver Compliance by using Multiple Baselines in Dell EMC OpenManage Essentials

This technical white paper provides information about managing hardware revision baseline in a data center by using Dell EMC OpenManage Essentials with different custom catalogs.

## Abstract

This technical white paper provides information about the creation and usage of multiple custom catalog baselines. With the increasing demand in datacenter to maintain different group of servers on different firmware and driver baseline, this feature will help datacenter administrator to ease the operation. Primary use case for this feature is to have different catalogs generated by DRM filtered for specific use cases, and use them against the custom groups.

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## Revisions

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## Introduction

This technical white paper provides information about the creation and usage of multiple custom catalog baselines. With the increasing demand in datacenter to maintain different group of servers on different firmware and driver baseline, this feature will help datacenter administrator to ease the operation. Primary use case for this feature is to have different catalogs generated by DRM filtered for specific use cases, and use them against the custom groups.

Quick links to the sections in this technical white paper:

- [Create a custom baseline in OpenManage Essentials](#)
- [Create custom baseline by using the System Update portal](#)
- [Create custom baseline from the Associate Baseline wizard](#)
- [Associate a Custom Baseline](#)
- [View group-wise Catalog Baseline Association](#)
- [View group-wise compliance of devices to a Catalog Baseline Association](#)



Figure 1 Manage firmware and driver compliance by using multiple baselines in OpenManage Essentials

# 1 Create a custom baseline in OpenManage Essentials

This section covers the methods to create custom baseline and the points to consider while creating the baseline.

## 1.1 Create custom baseline by using the System Update portal

The System update portal of OME has been redesigned by grouping similar actions together. As part of Catalog Baseline Action section, the “Create Catalog Baseline” action is listed.

1. From the **Manage** menu, select **Create Catalog Baseline**.

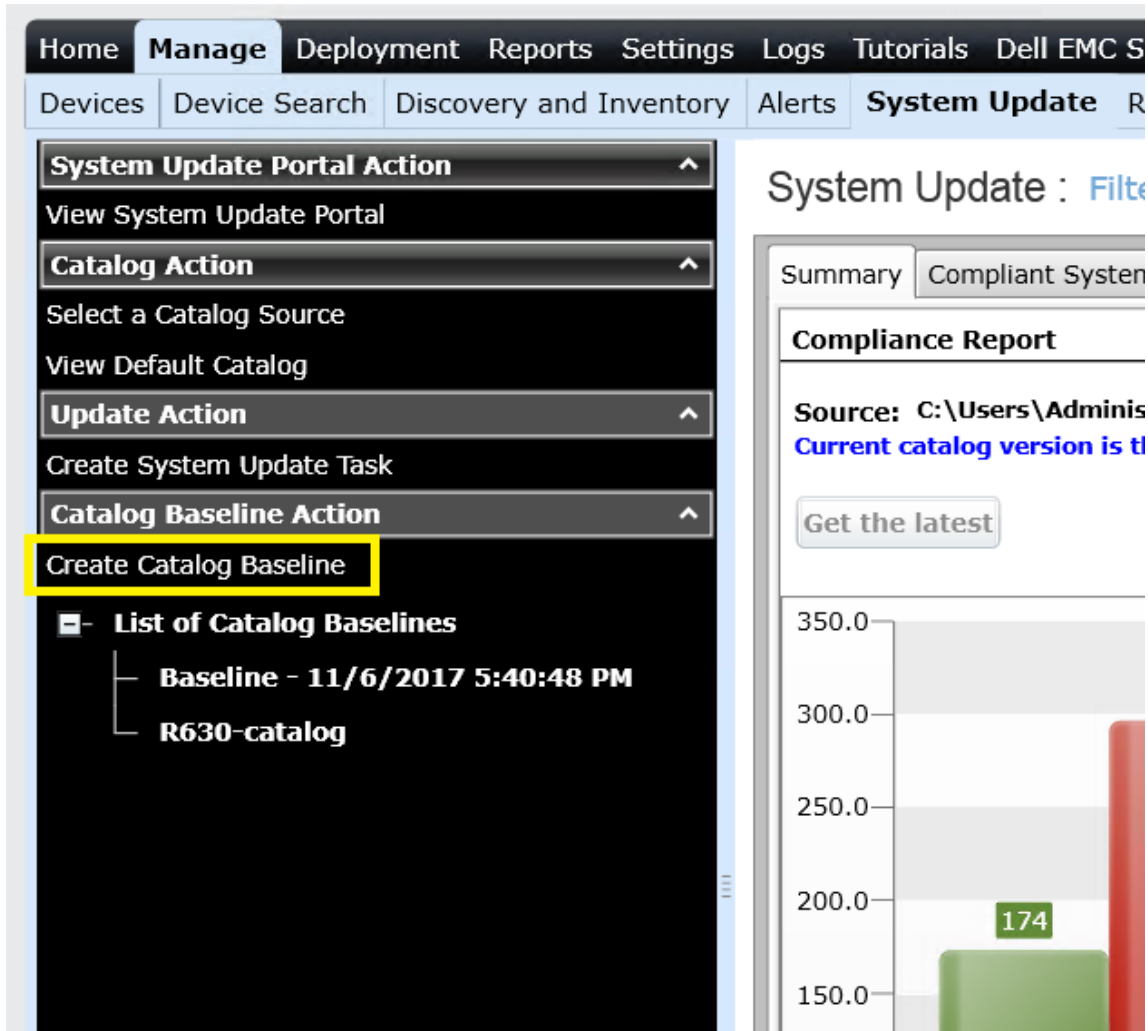


Figure 2 Select Create Catalog Baseline for creating custom baseline in OpenManage Essentials

2. In the **Create Catalog Baseline** dialog box, enter the name for the baseline and select the catalog file to import.

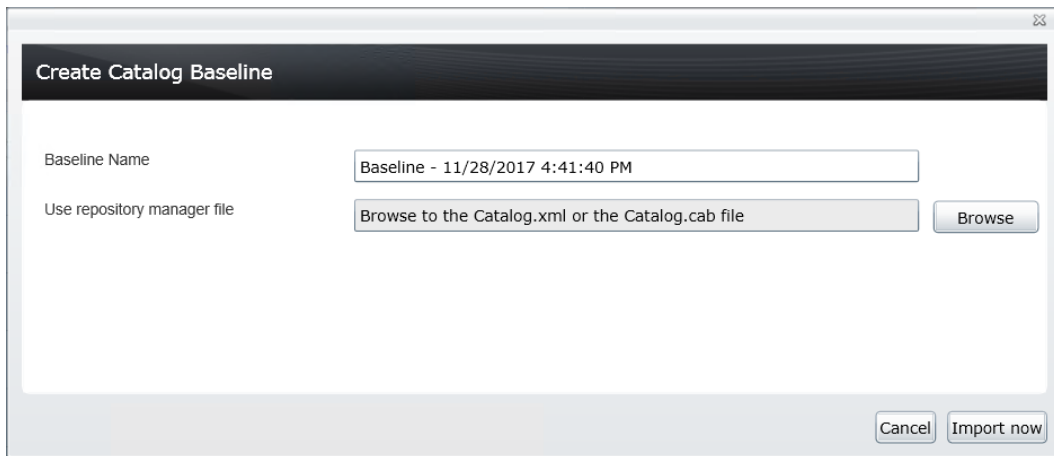


Figure 3 Enter a baseline name and select repository manager file

By default, OME creates the baseline name based on the current date and time. This is to avoid the duplicate names created for the custom catalog. If required, modify the name based on your requirements.

3. Select the catalog xml or cab file that must be imported as part of the operation.

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**Note**—This catalog selection path is referred in the server where OME is installed. If you are using OME from a remote system and trying to import the catalog file from the client system, the operation will fail. Therefore, either copy the catalog xml to the OME server or map the drive in the OME server so the catalog file is locally available to the OME services.

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4. After selecting the file, click **Import now**.

## 1.2 Create custom baseline in OpenManage Essentials

The device portal context menu with respect to the user-created custom group has a new item added as “Associate Custom Baseline”.

1. Click **Manage** → **Devices**, and then right-click the user-created custom group and select **Associate Custom Baseline**.

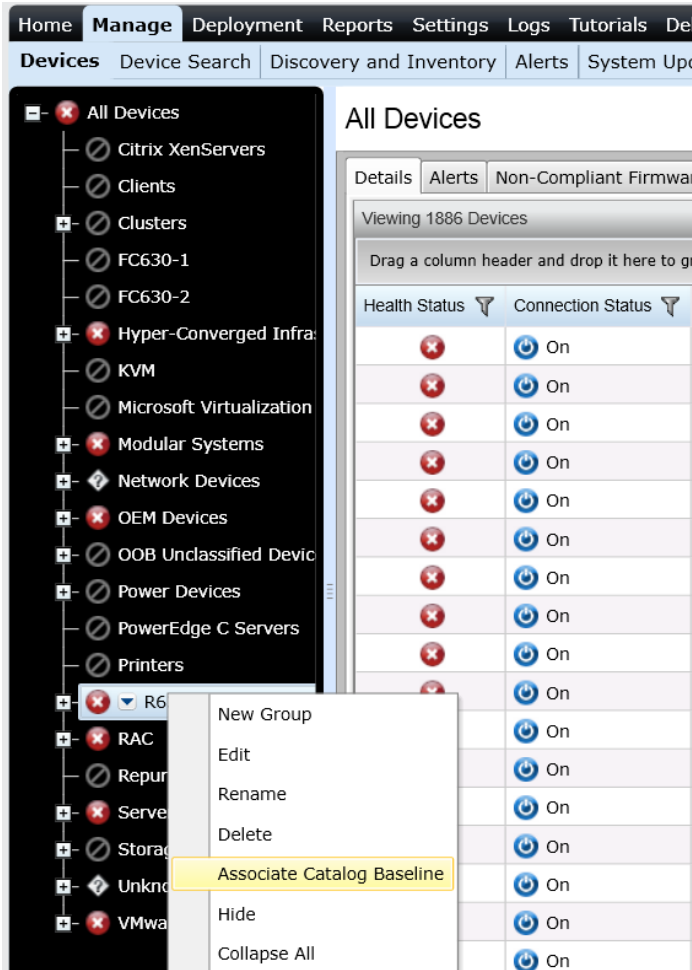


Figure 4 Associate a catalog baseline to device(s) in OpenManage Essentials

- In the **Associate Catalog Baseline** dialog box, click **Create Catalog Baseline**.

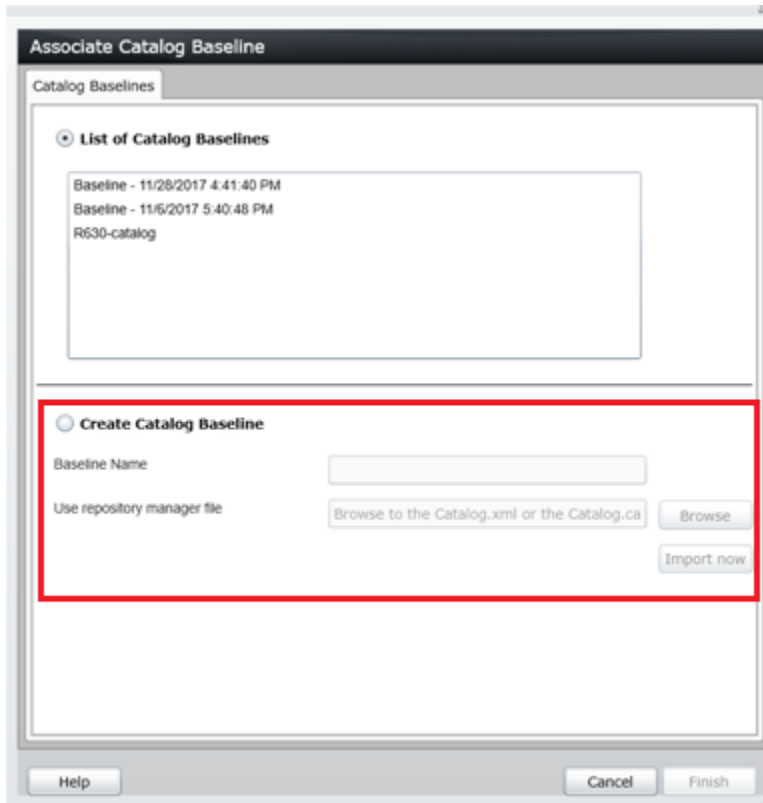


Figure 5 Create catalog baseline in OpenManage Essentials

- Enter or select data in the fields as described in [Create custom baseline by using the System Update portal](#) earlier in this technical white paper.

### 1.3 List a Custom Baseline

This section describes about listing the custom baselines that are created and their association to custom group if exists. After the catalog custom baseline is created, it is shown in the left pane under **Catalog Baseline Action** and in the working pane under the **List of Catalog Baselines** table.

Baseline Name	Group Name	Source	Release ID	File Path	Release Date
Baseline - 11/28/2017 4:41:40 PM		Custom Catalog	4c80166f	C:\Users\Administrator\Desktop\Catalogs\D4C4_SenkarR540v540-sep29.xml	9/29/2017 5:34:06 PM
Baseline - 11/6/2017 5:40:48 PM	FC630-1	Custom Catalog	2N7GF	C:\Users\Administrator\Downloads\Catalog\Catalog.xml	9/26/2017 8:47:22 PM
R630-catalog	R630	Custom Catalog	99d7fe6b	C:\Users\Administrator\Desktop\DRM_R630_Catalog.xml	9/29/2017 7:52:13 PM

Figure 6 List of catalog baselines in OpenManage Essentials



Group name column in the table shows the group name if the catalog is associated to one or more groups. If the catalog is associated with more than one group, the baseline will be shown in each row per group. If the catalog is not associated then the group name row is empty.

## 1.4 Delete a Custom Baseline

1. Right-click the baseline name listed under **List of Catalog Baselines**, and then select **Delete**.

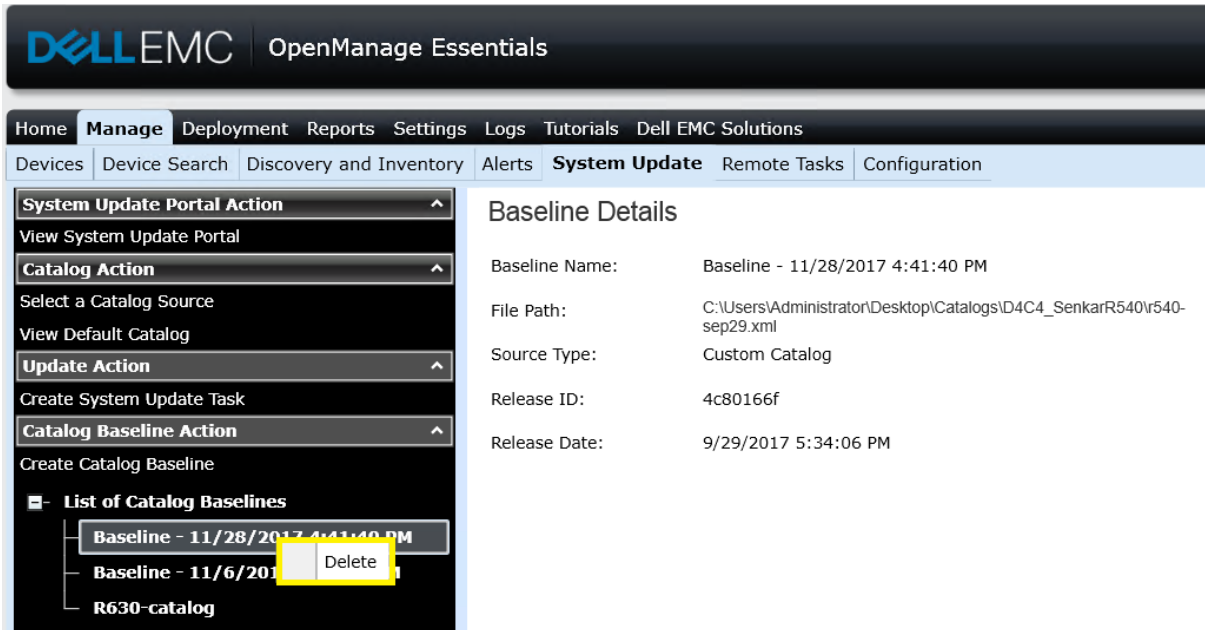


Figure 7 Deleting a catalog baseline in OpenManage Essentials

2. When prompted, click **OK**.  
The baseline is deleted. If the Delete operation fails because the baseline is associated with any of the custom group, disassociate the baseline from the group first, and then retry the operation.

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**Note**—You cannot delete more than one baseline at a time.

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## 1.5 Associate a Custom Baseline

Creation of custom baseline does not affect the compliance computation until it is associated with the custom group.

1. Click **Manage** → **Devices**, and then right-click the user-created custom group and click **Associate Catalog Baseline**.

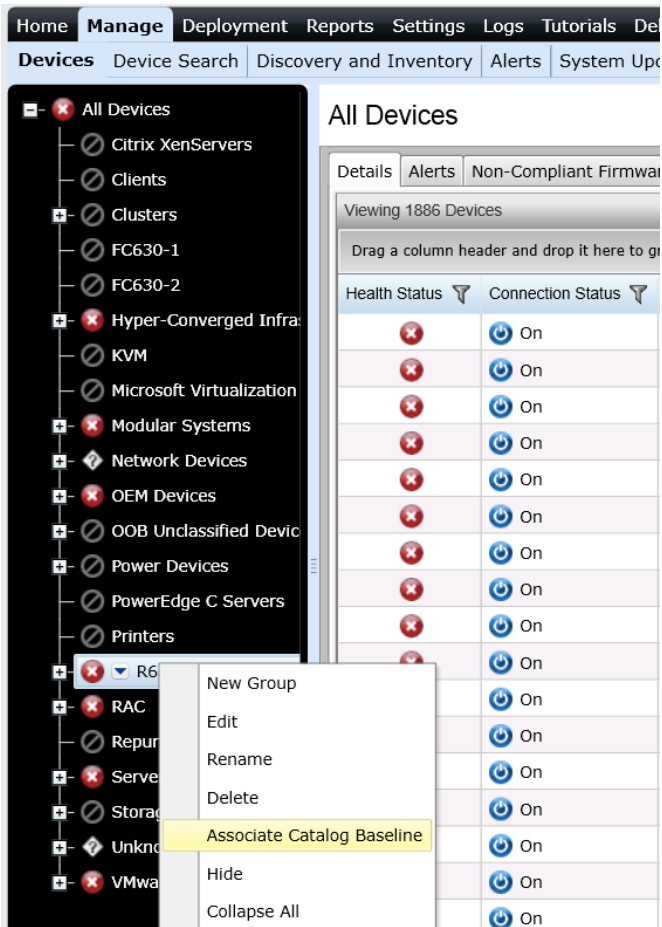


Figure 8 Associating a catalog baseline in OpenManage Essentials

2. In the **Associate Catalog Baseline** dialog box, the list of baselines that are already generated is displayed. Select any of them or create a new catalog baseline, if necessary.

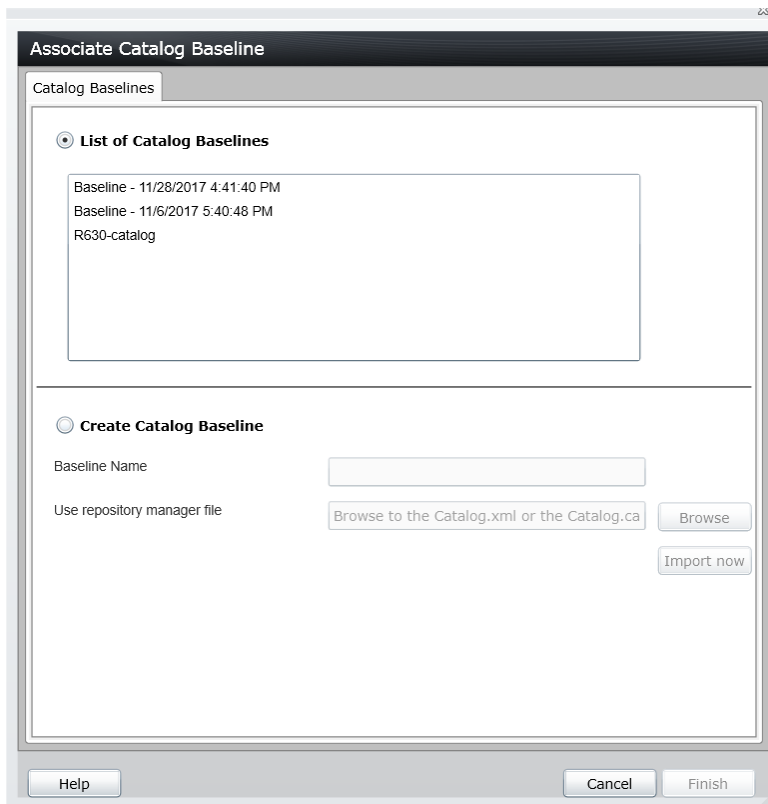


Figure 9 List of catalog baseline

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**Note**—After the association is done, OME takes some time to reflect the changes because of the time taken to re-compute the applicable packages for all the devices under the group.

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Associating catalog baseline is possible only with the user-created custom group. This operation is not permitted on the system generated groups. You can associate the baseline only to the first level of custom group. Nested group levels will not have option for association. Only one catalog baseline can be associated against a group. Meaning, a group can have a maximum of one catalog association. But same catalog baseline can be associated to different custom groups.

## 1.6 Re-associate or de-associate a Custom Baseline in OpenManage Essentials

After associating the group to a baseline, you can re-associate or de-associate a baseline.

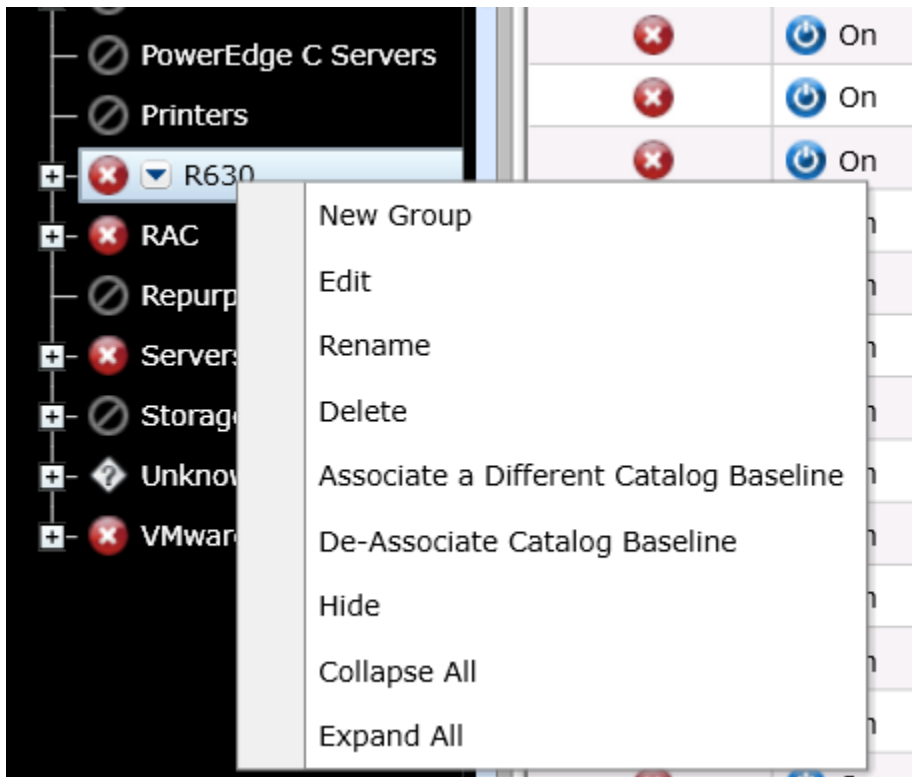


Figure 10 Associating and De-associating a catalog baseline

1. To re-associate, select **Associate a Different Catalog Baseline**. Complete the tasks as listed in [Associate a Custom Baseline](#).
2. To disassociate, select **De-Associate Catalog Baseline**. The association with the group is removed.

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**Note**—If you de-associate baseline from the group then the compliances of all the devices in that group will be computed against the default catalog.

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## 2 Updates made to the System update portal

System update portal is updated to show the multiple associated baselines based compliance & grouped for the actions. New bar graph is added to provide the feature to list all the associated groups compliance.

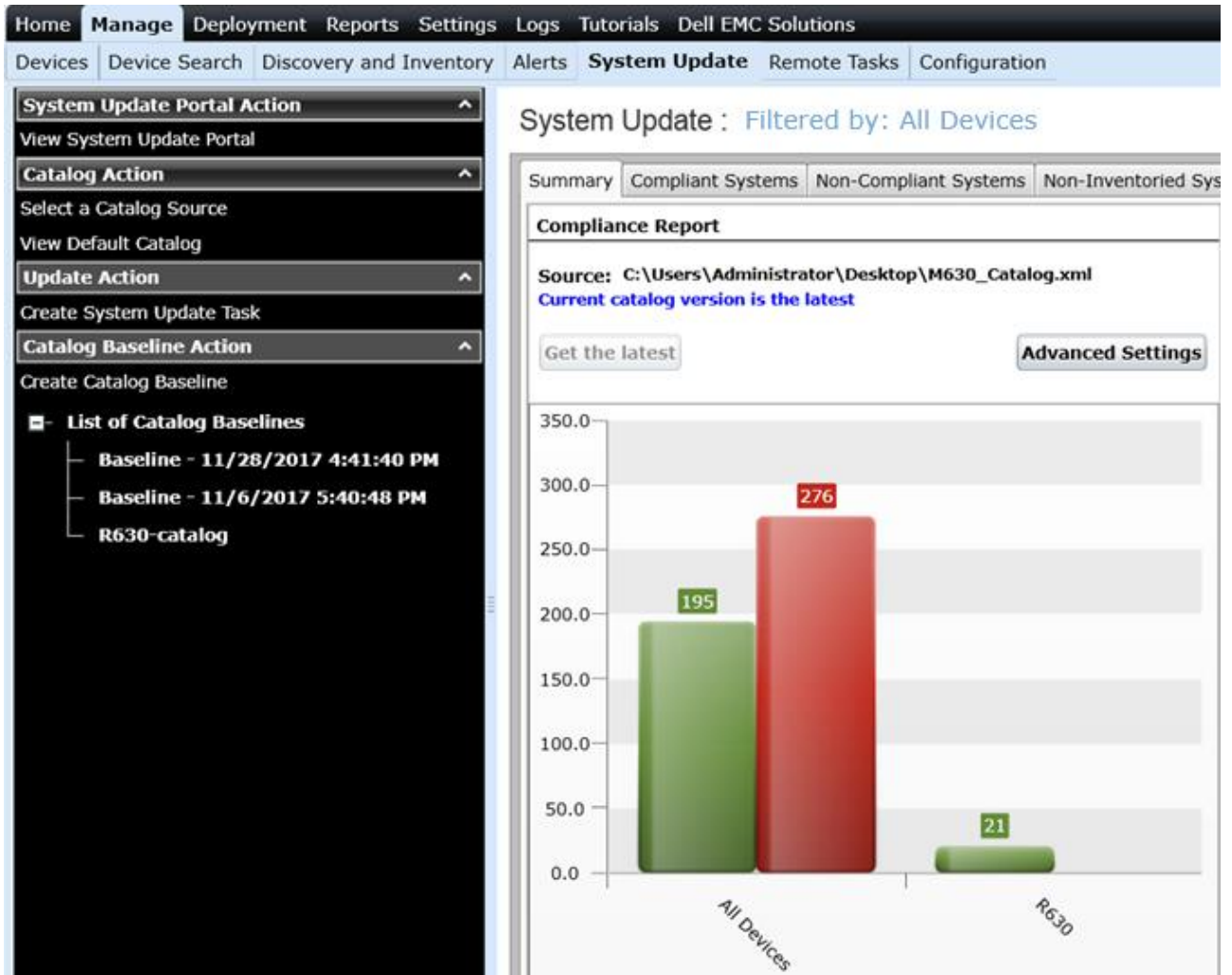


Figure 11 System update portal

**Note**—Only the user-created custom groups that are associated will be shown in the bar graph, along with all the devices. The All Devices group displays the devices against default catalog and all devices associated to the custom catalog.

If the device is associated to custom catalog, it will not be considered against default catalog. If the device is present in more than one custom group that are associated then compliance of such device is computed against each catalog baseline and listed in the group appropriately. By clicking the bar chart, you can view the respective page with filtered devices and baseline.



Figure 12 Compliant and noncompliant devices

Non-inventoried systems, and Issues and Resolutions are added as actionable button items that are not group-specific. When clicked, the respective page is displayed.

If you click the **Filtered by** option, the **Select System Update Target Devices and Device Groups** dialog box is displayed.

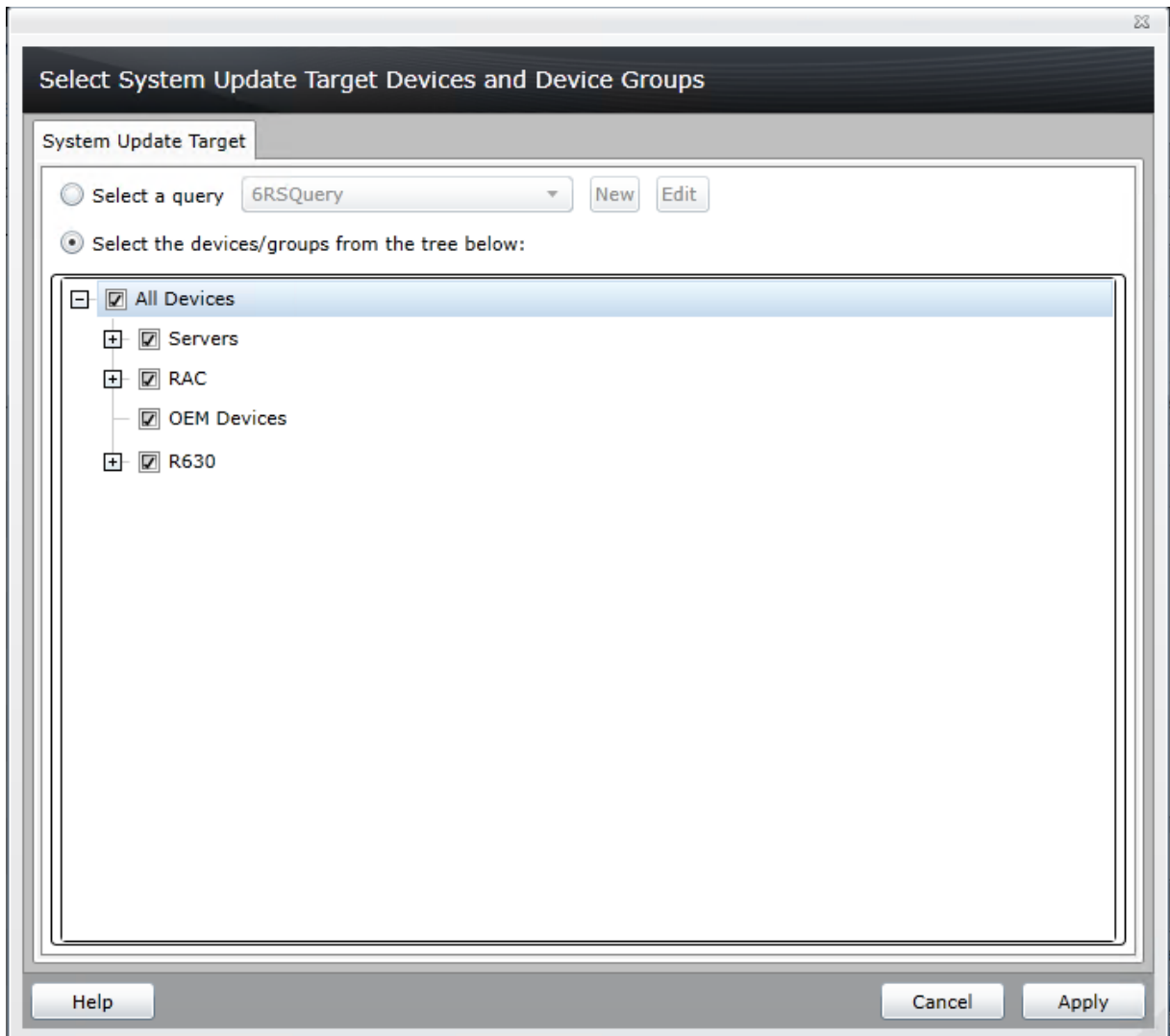


Figure 13 System update target devices and device groups

You can filter devices either by using query or by using groups. After a group is selected, the Pie chart is displayed. But this filtering will not filter based on the baseline. Therefore, if the device is part of two different groups with different baselines associated then the device will be shown twice (one per group/baseline).

System Update : Filtered by: R630

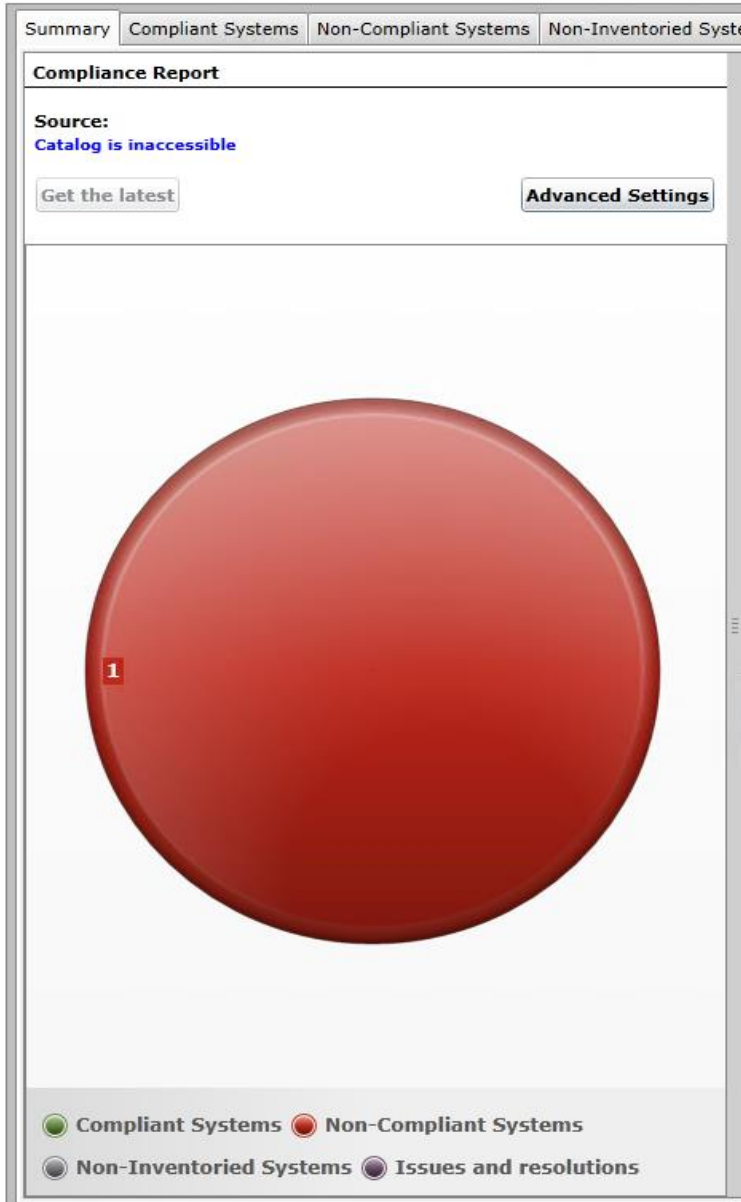


Figure 14 System update portal

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**Note**—To view the non-filtered devices and bar chart again, click **View System Update Portal**.

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If you are trying to update such devices, you can select the device only once. If you try to select both groups then OME displays an error message to block the operation.



### 3 View group-wise Catalog Baseline Association

OpenManage Essentials 2.5 shows the association between Custom Group(s) and Catalog Baseline(s). To view group-wise catalog baseline association details on System Update portal, click **View catalog Baseline Associations**. Figure 15 shows two custom groups associations with two different catalog baselines. Note that VxFlex Ready Nodes group is by default associated to the Default catalog.

The screenshot displays the OpenManage Essentials System Update portal. The left-hand navigation pane is expanded to show the 'View Catalog Baseline Associations' option, which is highlighted with a red box. Below this option, a tree view shows 'List of Catalog Baselines' with sub-items 'My Baseline 1' and 'My Baseline 2'. The main content area, titled 'Device Group to Catalog Baseline Associations', contains a table with the following data:

Group Name	Baseline Name
Custom Group 1	My Baseline 1
Custom Group 2	My Baseline 2
VxFlex Ready Nodes	Default

Figure 15 Device Group To Catalog Baseline Association

## 4 View group-wise compliance of devices to a Catalog Baseline Association

OpenManage Essentials 2.4 and later versions show information about the catalog baseline(s) associated with compliant or non-compliant device(s) belonging to custom group(s).

To view the catalog baseline associations, on the System Update portal, switch to Compliant Systems tab or Non-Compliant Systems tab. Figure 16 shows Non-Compliant Systems Tab selected, device(s) belonging to custom group(s), and associated catalog baseline name(s) to the custom group(s).

The screenshot shows the System Update portal with the 'Non-Compliant Systems' tab selected. The table below lists the systems and their associated catalog baselines.

System Name	Group Name	Baseline Name	Model Type	Operating System	Service Tag	Update Method
idrac-JH6ZWX1	Custom Group 1	My Baseline 1	PowerEdge M620	VMware ESXi 5.1.0 build-799733	JH6ZWX1	Out-of-band
idrac-R1-R730-1	All Devices	Default	PowerEdge R730	VMware ESXi 6.0.0 build-3620759	HD3CH62	Out-of-band
iDRAC-JB6J6Q2	All Devices	Default	PowerEdge R740xd	Unknown	JB6J6Q2	Out-of-band
iDRAC-17769R2	Custom Group 2	My Baseline 2	PowerEdge C6420	Unknown	17769R2	Out-of-band
iDRAC-9GH5LQ2	All Devices	Default	PowerEdge R640	Windows Server 2016	9GH5LQ2	Out-of-band
iDRAC-17909R2	All Devices	Default	PowerEdge C6420	Unknown	17909R2	Out-of-band
iDRAC-17879R2	All Devices	Default	PowerEdge C6420	Unknown	17879R2	Out-of-band
idrac-R6-R510-1	All Devices	Default	PowerEdge R510	Unknown	96ND4BS	Out-of-band

Figure 16 Device To Catalog Baseline Association Group-wise

Association of non-compliant device and baseline (group-wise) can also be viewed in the OME device tree.

1. On the OME device tree, click on a custom group.
2. In the right pane, click **Non-Compliant Firmware & Drivers**.
3. Figure 17 shows the following:
  - Custom Group 1 selected in the Device tree.
  - In the working pane, on the **Non-Compliant Firmware & Drivers** tab, the devices belonging to the groups are listed along with the baseline they are associated with (My Baseline 1).

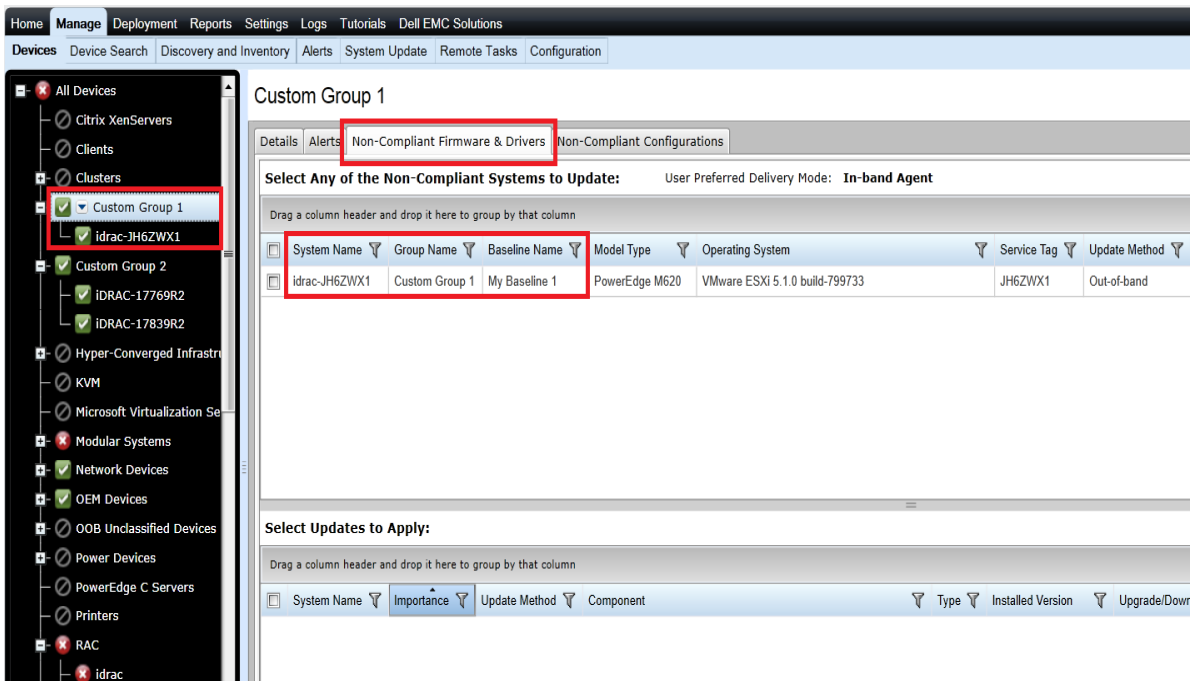


Figure 17 Custom Group Baseline Association

Similarly, Figure 18 shows the two devices that belong to the Custom Group 2 and the firmware baseline they are associated with (My Baseline 2).

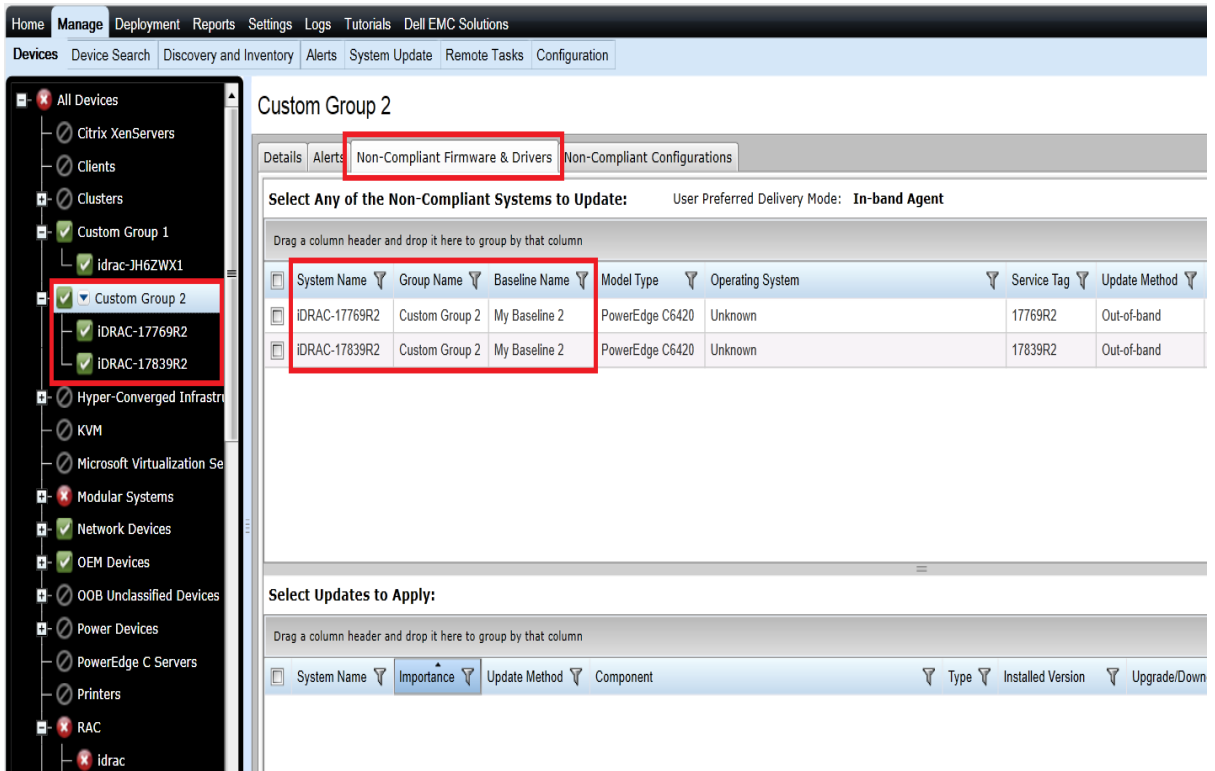


Figure 18 Custom Group Baseline Association

## A Technical support and resources

[Dell.com/support](http://Dell.com/support) is focused on meeting customer needs with proven services and support.

### A.1 Related resources

Referenced or recommended Dell publications:

- Chassis discovery feature in OME:  
[http://en.community.dell.com/techcenter/extras/m/white\\_papers/20441673](http://en.community.dell.com/techcenter/extras/m/white_papers/20441673)
- Deployment and Managing Configurations with Dell OpenManage Essentials