What's New in Operations Manager and Performance Advisor in 3.7

This note aims to provide an insight into why you should consider upgrading to the 3.7 release of Operations Manager and Performance Advisor.

DataFabric Manager Server Improvements:

This release provides improved availability, support for disaster recovery and enhanced scalability and performance for your critical DataFabric Manager server deployments. The server also hosts a new management application -- Provisioning Manager -- for NetApp storage.

- - - Performance Improvements in DataFabric Manager - - -

Considerable improvements in the performance and scalability of the DataFabric Manager server include reduced CPU and memory usage, and Operations Manager web UI response time improvements.

6.4 OPERATIONS MANAGER, PROTECTION MANAGER, AND PROVISIONING MANAGER SCALED-OUT RESULTS

The following table shows the performance improvements made in DataFabric Manager 3.7 monitoring and managing actual storage systems similar to a customer environment.

Report Name	DFM 3.6R1 (in seconds)	DFM 3.7 (in seconds)
Summary	9.76	8.18
Appliances	19.17	1.01
Events	22.21	2.90
File systems	46.56	7.33
Aggregates	25.73	1.53
Filers	30.58	1.56
Volumes	29.11	2.14
Qtrees	50.13	7.67

For more info, refer to *Operations Manager sizing guide*.

- - - Access to the DataFabric Manager Database and Performance Advisor data - - -

Operations Manager provides a rich set of default reports, along with an ability to define custom reports. Many customers however depend on the advanced reporting functionality and flexibility that reporting engines such as Crystal Reports provide. This release allows integration of Operations Manager with reporting engines by allowing ODBC/JDBC access to parts of the DataFabric Manager database. Besides, customers can use one database as a central data repository for enterprise wide reporting. This release supports export of the DataFabric Manager and Performance Advisor data to files for bulk loading into other databases. *More info ...*

Also see Operations Manager Data Export Tool for loading exported data into a MySQL database.

- - - High availability of DataFabric Manager using Veritas Cluster Server (VCS) - - -

Earlier releases of DataFabric Manager supported clustering using Microsoft Cluster Server (MSCS) on Windows. This release improves the availability of critical DataFabric Manager deployments on Linux and Solaris using Veritas Cluster Server, protecting the management applications from service, OS and hardware failures. This feature requires Veritas Storage Foundation and High Availability Solutions 5.0 with MP1, and is supported on the following server OS: Solaris 9, Solaris 10, RHEL 4 and SLES 9 with SP3. *More info ...*

- - - Disaster recovery support for DataFabric Manager - - -

DataFabric Manager 3.6 greatly improved Recovery Point Objective (RPO) and Recovery Time Objective (RTO) of the DataFabric Manager server by integrating with NetApp storage system snapshots. This release takes the solution one step further, by providing automated mirroring of DataFabric Manager data for disaster recovery. A passive DataFabric Manager server can be configured on the disaster recovery site. In the event of a disaster, the passive server can be used to manually failover to the DR copy, and bring the DataFabric Manager services online. The DR support is available on Windows using SnapDrive 6.0. However, the Protection Manager license must be enabled on the DataFabric Manager server. *More info ...*

- - - Additive Licenses for DataFabric Manager Features - - -

This release simplifies the task of ordering additional node count for managing newly deployed storage systems by providing licenses that are incremental. You do not need to specify the existing node count and serial number while placing the order. A new additive license does not replace existing licenses, rather adds additional node counts to the existing license.

Operations Manager Improvements:

- - - Monitoring storage systems running Data ONTAP 7.3 using SNMPv3 - - -

Data ONTAP 7.3 supports SNMPv3 for a more secure management communication. Operations Manager now supports discovering and monitoring systems running Data ONTAP 7.3 using SNMPv3. Storage systems can either be individually added by specifying SNMPv3 credentials or they can be configured per network for automatic discovery. You have the option to disable SNMPv1 or SNMPv3 communication if required. *More info ...*

Performance Advisor Improvements:

- - - Performance Reports - - -

Performance Reports provides summary of utilization of storage system by aggregating performance data over a given period of time. Similar to Operations Manager reports, the performance reports are available on the Web UI, can be exported, scheduled and e-mailed. The reports help you in capacity planning, comparing utilization of multiple storage systems, and identifying hot and cold

systems. The data is presented using time periods of one day, week, month, quarter or year. Also custom reports such as a report with space usage and performance can be created by using Operations Manager report columns and including performance metrics in the same report.

- - - Threshold Inheritance - - -

Performance Advisor in DataFabric Manager 3.6 allowed creation of thresholds on various performance counters. However, a created threshold was saved for each object. For example, a threshold on latency created at a storage system level would be saved for each volume. New volumes created later would not to have a threshold, requiring you to create a new one. In this release, counter thresholds that you apply to a parent object are automatically applied to its child objects. Any new object added at the child level inherits the thresholds defined at the parent object. A parent object can be a resource group, a storage system, an aggregate etc. *More info ...*

- - - Combined Thresholds - - -

Performance Advisor in DataFabric Manager 3.6 allowed creation of threshold with one performance counter. This prevented definition of thresholds that considered performance attributes of multiple objects or multiple counters. In this release, you can create a threshold with a combination of counters: when all the counter values meet or exceed the specified threshold, an event is generated. *More info ...*

- - - Filtering Thresholds using Resource Properties - - -

Thresholds in the earlier releases could not include a filter based on the properties of a resource. For e.g. different thresholds could not be easily created for total_transfers on a SATA disk and FC disk. In this release, you can filter thresholds using resource properties by applying conditions on disk types, disk roles, system models, and system versions. *More info ...*

- - - Threshold Template - - -

This release also simplifies management of thresholds in a large storage environment. You can group thresholds into a single unit by using a threshold template and then associating objects to these templates. *More info ...*

- - - User Interface Enhancements - - -

A number of changes in the user interface aimed at improving the usability of the tool are introduced in this release.

> **Custom Dashboard** lets you choose any performance view (canned or custom view) to be displayed as the dashboard for the application. A custom default view can also be chosen for each object.
> **Time axis synchronization** in performance views lets you view performance data in all the charts of a view for the same time period. Changing the time period in one chart changes the time period of all the charts.
> **Auto scaling of y-axis** in charts ensures that the peaks are always in view.
> **Enhanced layout selector** lets you switch between chart layouts such as 2x2 and 2x3.

Additional charts that do not fit the layout are listed as icons at the bottom of the interface. These icons can be dragged into the view area.
Thresholds lines in views let you modify the threshold value by moving the line up or down.

- - - Bar Charts in Custom Views - - -

Bar charts in Performance Advisor are a great way to identify heavily used storage systems or components at a given point in time. This release allows you to add bar charts to a custom view listing up to ten objects in the chart. You can chose to display either the top or bottom objects by a performance counter. For instance, top volumes by ops or bottom volumes by ops.

- - - Modify Data Collection and Retention - - -

In this release, you can modify the interval at which Performance Advisor collects data for any view (canned or custom view) and the duration for which the data is retained. This allows customization to optimize the load on the DataFabric Manager server and the storage systems.

Links

Operations Manager Product Overview
Download Operations Manager (Linux, Windows and Solaris)
Operations Manager Product Documentation