AUTHORIZED DOCUMENTATION

Release Notes

Novell®
Managed Objects

4.7

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About This Guide

Novell® Managed Objects™ *Release Notes* provides specific information about the latest release including a look at new currency and features, technical considerations, what's no longer supported and a listing of enhancements and resolved issues.

Audience

This guide is intended for Managed Objects system administrators and installers of Managed Objects.

Guide Sections

- Chapter 1, "About Managed Objects," on page 9
- Chapter 2, "What's New in v4.7," on page 13
- Chapter 4, "Discontinued Support," on page 27
- Chapter 3, "Technical Considerations," on page 15
- Chapter 5, "Enhancements and Resolved Issues," on page 35

Additional Documentation

For other related documentation:

- *Managed Objects 4.7 Getting Started*
- *Managed Objects 4.7 Server Installation Guide*
- *Managed Objects 4.7 Console Guide*

Documentation Updates

In general, Managed Objects provides two main sources of information to help you configure and use Managed Objects products:

- **Online help:** The help is part of each product and available from multiple locations depending upon the product; look for help in the upper right of a window or dialog box as a drop-down menu option, a help button, or a question mark symbol (?).
- **Guides:** Available as PDF files on the installation CD, the guides provide an overview of how to solve a problem, complete a task, or use a specific Managed Objects product.

Documentation Conventions

In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path. The > symbol is also used to connect consecutive links in an element tree structure where you can either click a plus symbol (+) or double-click the elements to expand them.

A trademark symbol (®, ™, etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a forward slash to preserve case considerations in the UNIX* or Linux* operating systems.

About Managed Objects

1

Managed Objects™ provides a platform implemented within a technology environment that integrates information captured by multiple management system to provide a single view of the technology environment.

- Section 1.1, “Product Overview,” on page 9
- Section 1.2, “About Managed Objects Documentation,” on page 10
- Section 1.3, “Contacting Novell Technical Support,” on page 11

1.1 Product Overview

To integrate information and make it meaningful for your business, Managed Objects provides the following applications:

- **Business Service Level Manager (BSLM):** measures service levels and agreement health and compliance, both in real time and historically.
- **Business Service Configuration Manager (BSCM):** enables you to create service models for managing and monitoring your entire service cycle.

In addition to the Managed Objects console, Managed Objects four Web clients/interfaces are available:

- **myMO:** myMO is a Web portal that allows users to receive custom content from Managed Objects as well as other sources.
- **Portal Component Toolkit:** a component of the Business Service Dashboard, provides a mechanism for creating custom views and components to display information provided by Managed Objects in a Web browser.
- **PortalBuilder:** a component of the Business Service Dashboard, is a Web application that provides a “point and click” user interface for creating Web pages which surface information in Managed Objects in reports and charts.
- **myCMDB:** a Web application that combines Web 2.0 and structured social networking principles to build and maintain CMDB projects.

To integrate Managed Objects with other third-party applications and to expand its reporting capabilities, Managed Objects provides the following:

- **Managed Objects SQL:** provides functionality in Managed Objects that allows for third-party applications to have read access to Managed Objects data for reporting purposes.
- **Managed Objects Web Services Application Programmer Interface:** an integration point for customer or third-party applications to interact with data warehoused in the Managed Objects Server for query, insert, update, and delete functions.
- **Web 2.0 Connect:** a tool for developers of Rich Internet Applications to access and utilize Managed Objects resources (data and/or functions) in their applications.

To gather technology and information, Managed Objects uses adapters that connect to and communicate with third-party management systems. In addition, Managed Objects provides the following management applications for data collection:

- **Business Data Integrator (BDI):** mines data such as business metrics and service configuration items (CI) and change data from databases; including service CIs, sales totals, help desk metrics, and analytics from business intelligence tools.
- **Business Experience Manager (BEM):** proactively monitors Web site and application availability in real time, from the user perspective.
- **Business Technology Insight (BTI):** performs auto-discovery on network servers, devices, applications, and services.
- **Event Integrator:** gathers and processes line-oriented ASCII (American Standard Code for Information Interchange) data, sometimes referred to as "raw events," which are alarms or informational messages that can originate from many different sources.
- **FX adapter:** provides the capability to distribute file and XML-based data collection, parsing, processing, and alarm generation using F/X Monitors into multiple Managed Objects servers.
- **Guard adapter:** a special purpose adapter developed to meet the need for secure exchange of infrastructure and service management information between networks within Multi-Level Security environments.
- **SNMP adapter:** allows you to poll, gather, and view data available on your SNMP agents.

1.2 About Managed Objects Documentation

The release notes briefly describe:

- New and enhanced functionality for Managed Objects
- Discontinued support for third-party software and previous Managed Objects versions and features
- Technical considerations, particularly for upgrading from previous versions
- A list of resolved issues and enhancements by product with SR/CR number

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NOTE: Beginning with version 4, the product name has changed from Formula to Managed Objects v4. All documents in this version refer to the Managed Objects v4 product. However, in this document and others, references to specific releases such as 3.5 still refer to the Formula product name.

Additional Managed Objects documentation is available on the Managed Objects server in the `html/docs` directory. Refer to this documentation for more information about installation, configuration, and product features.

- If you are new to Managed Objects and just getting started, for an overview of functionality, tools, and an introduction to planning your installation, see the *Deployment Guide*.
- For information regarding supported versions of third-party management systems, databases, and other software relevant to Managed Objects, see the *Deployment Guide*.

1.3 Contacting Novell Technical Support

Access our award winning support Web site (http://support.novell.com) for a number of self-help resources and to register and check on service requests. For high severity issues, we recommend you call Novell Technical Support directly. Visit http://support.novell.com/contact/ (http://support.novell.com/contact/) to find the phone numbers for your region.

What's New in v4.7

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Managed Objects™ v4.7 contains updates for approximately 180 resolved issues and enhancements. See Chapter 5, "Enhancements and Resolved Issues," on page 35 for a list of resolved issues by product.

Managed Objects v4.7 delivers new functionality and enhancements described in the following topics:

2.1 Enhanced Layout View in Managed Objects Console

The Managed Objects console now offers the following enhancements for the Layout view:

- A new library of node styles has been added featuring 3 dimensional technology objects. State color updates in 2 sides of nodes style or entire node style images.
- New object types and shape transforming commands have been added using the SVG bind language. New objects include child containers and stacking containers. New commands include condition gradient on shape border and fill; custom transformations on various shape attributes, and add captions.
- New drawing template feature allows a drawing to be saved as a template to be used later in building other custom drawings.

2.2 Enhanced myMO

myMO has been upgraded to Liferay 5.2.3 for its Portal platform. myMO also includes the following enhancements:

- Enhanced functionality now provides column sorting and filtering for the Element Properties, Alarm Properties, and Properties Table.
- New Chart Builder portlet allows you to build and deploy charts containing data from Managed Objects.
- Enhanced Performance portlet now provides display-side configuration settings.

2.3 Updated DBMS, Trouble Ticketing System, OS and Management System Support

The following database management systems (DBMS), discovery tools, operating systems (OS), and management systems are validated for use with Managed Objects. For more information, see the *Installation Guide* and the *Adapter and Integration Guide*.

2.3.1 Supported DBMS

Managed Objects now officially supports the following database management systems:

- Microsoft SQL Server 2008

- Oracle 11g
- Sybase 15

2.3.2 New Management System Integrations

Managed Objects officially integrates to the following management systems:

- Computer Associates Spectrum 9
- HP OpenView Network Node Manager 8
- HP OpenView Operations for UNIX 8
- IBM Micromuse Netcool 7.2

2.3.3 New Trouble Ticketing System Integrations

Managed Objects officially integrates to the following trouble ticketing systems:

- BMC Remedy 7.1

Technical Considerations

3

This section highlights some important technical considerations regarding Managed Objects™ v4, and to point out known issues with the product functionality and to call attention to changes in the default behavior of the product.

- Section 3.1, “Upgrade to v4.7,” on page 15
- Section 3.2, “Adapter Considerations,” on page 15
- Section 3.3, “ORB Upgrades,” on page 18
- Section 3.4, “Business Experience Manager Considerations,” on page 18
- Section 3.5, “Business Service Dashboard Considerations,” on page 18
- Section 3.6, “Business Service Level Manager Considerations,” on page 20
- Section 3.7, “Formula Event Data Store Database Initialization,” on page 21
- Section 3.8, “Alarm Date/Time Discrepancy,” on page 22
- Section 3.9, “ConfigStore,” on page 22
- Section 3.10, “Performance Considerations for Console Configurations,” on page 23
- Section 3.11, “myMO Considerations,” on page 23
- Section 3.12, “myCMDB Considerations,” on page 23
- Section 3.13, “Java Related Known Issues,” on page 23
- Section 3.14, “Installation and Upgrade Considerations,” on page 23

3.1 Upgrade to v4.7

3.1.1 Patches for 4.7

Managed Objects releases patch bundles to update v4.7. These patch bundles are installed using an automated installation process. No manual changes are required except for upgrading PortalBuilder. For more information on installing v4.7 patches, see the Managed Objects *Server Installation Guide*.

IMPORTANT: Patch levels for Managed Objects, myCMDB and myMO must be updated to the same patch level or the software will not run properly.

3.2 Adapter Considerations

- Section 3.2.1, “Considerations for All Adapters,” on page 16
- Section 3.2.2, “InterCommunication Adapter,” on page 16
- Section 3.2.3, “Renamed Adapters,” on page 16
- Section 3.2.4, “BMC Remedy Action Request System (ARS) Adapter Considerations,” on page 17
- Section 3.2.5, “Computer Associates Spectrum Adapter Considerations,” on page 17

- Section 3.2.6, “HP OpenView Network Node i-series (NNMi) Adapter Considerations,” on page 17
- Section 3.2.7, “Tideway Foundation,” on page 18

3.2.1 Considerations for All Adapters

Every Managed Object release can include new adapter properties for various adapter types. On upgrade, existing adapter instances do not automatically update with default values for these new properties which can cause unexpected behavior. After upgrading Managed Objects, we recommend checking adapter definitions to set new adapter properties to system defaults or update with the desired value.

For more information on adapter properties, see the *Adapter and Integrations Guide*.

3.2.2 InterCommunication Adapter

The InterCommunication adapter (ICA)(formerly known as the F2F adapter) allows Managed Objects servers to communication through firewalls. To use the ICA, the versions of the Managed Objects server must be as follows:

- Both servers must be v4.7
- One server is v4.6 and the other is v4.7

3.2.3 Renamed Adapters

A number of adapter product name changes have resulted in two (or more) sets of adapter choices when creating adapters. Different license keys are required for the current and legacy adapters, resulting in the following:

- For existing customers, Managed Objects will continue to support the older version of adapters. This is necessary to retain stored data and/or relationships associated with the element DNames based on the legacy adapter name. If you renamed your adapters to something other than the default, there should be no problem with switching over to the current adapters.
- For new customers, Managed Objects will issue license keys for the current adapter versions only. If you choose to create a new adapter using the legacy adapter version, you will likely receive a license error.

Managed Objects recommends that existing customers use the current versions of these adapters unless you have already:

- Stored historical performance and/or SLA data for elements/alarms from the adapter and wish to retain the data
- Started using the legacy adapter in your production environment

Managed Objects also recommends that in the future customers always rename their adapters instead of using the default adapter name. This avoids potential issues with adapter name changes.

3.2.4 BMC Remedy Action Request System (ARS) Adapter Considerations

Please consider the following technical issues when configuring and using the updated BMC Remedy ARS adapter:

- BMC Remedy adapter on 64-bit VM: A potential incompatibility exists when running the 32-bit Remedy libraries, as distributed with Managed Objects and used by the Remedy adapter, on a Managed Objects server running under a 64-bit JVM. If the following log message is recorded, run Managed Objects using a 32-bit JVM instead of a 64-bit JVM. (It is assumed the Remedy libraries have been installed and configured correctly, following the instructions in the *Adapter and Integration Guide*.)
- "Unable to find the correct BMC Remedy libraries": Please ensure you are using the correct BMC Remedy libraries for your operating system and that the libraries are in the expected path. Also, ensure you are using the correct libraries for the computer architecture in use (64 vs. 32 bit).
- After updating the Remedy configuration file by modifying the configuration file directly, or by using E*dit Remedy Configuration* or *Show Server Information* right-click options, the adapter must be restarted.
- When removing a configured schema from a BMC Remedy ARS adapter, alarms are removed immediately for the removed schema. However, to remove the elements, the adapter must be restarted.
- Adding fields to an existing schema in Remedy Administrator won't be reflected in Managed Object until the BMC Remedy ARS adapter is restarted.

3.2.5 Computer Associates Spectrum Adapter Considerations

Please consider the following technical issues when configuring and using the updated Spectrum adapter:

- Showing Service Root Cause and Impact: The CA Spectrum adapter does not support the Show Root Cause and Show Impacted features. This functionality will be available in a future release.
- Using the CA Spectrum Adapter: The Managed Objects Layout View displays topology views that are similar to those presented in CA Spectrum. Managed Objects can display models and their positions and the links between them. However, Managed Objects does not display the more complex pictographs that represent composite sites. When defining code that searches for distinguished names (DNames) in Spectrum elements, be sure to search for the entire DName. The display names used for elements can consist of shortened names that could be duplicates. The DName will be encoded with a model handle that can uniquely identify the element. Distinguished names are explained in the *Monitoring Guide*, *Viewing Element Properties*.

3.2.6 HP OpenView Network Node i-series (NNMi) Adapter Considerations

The Managed Objects HP NNMi Integration adapter requires an NNMi SDK Enablement license from HP.

3.2.7 Tideway Foundation

Unlike other adapters, the Tideway Adapter does not change to critical when the adapter loses network connectivity.

When configuring the communications settings for a Tideway Adapter appliance, note that the *Communications Settings* dialog incorrectly states the *Poll Period* is in hours. The Poll Period is actually in seconds with a minimum value of 5. The Tideway Adapter will be modified to reflect these changes in a future release.

3.3 ORB Upgrades

If you are upgrading from a previous release of Managed Objects, see the *Server Installation Guide*. Updated ORBs must be upgraded to work with the current version of Managed Objects software.

If your environment consists of multiple Managed Objects servers that do not share ORBs, you can upgrade one server at a time.

If your environment consists of multiple Managed Objects servers that share ORBs, please contact Novell Technical Support (http://support.novell.com/) for instructions on upgrading servers and installing two versions of ORBs. Multiple Managed Objects versions cannot connect to a single ORB.

3.4 Business Experience Manager Considerations

The BEM application deployment options have changed so that the full application is installed by the installer. It is no longer a requirement to have a Managed Objects server running in order to run BEM. There is a new mechanism for centralized patch deployment. For more information about deploying patches, see the *Business Experience Manager Guide*.

3.5 Business Service Dashboard Considerations

Please consider the following technical issues when configuring and using the PortalBuilder:

- Section 3.5.1, “Database Considerations,” on page 18
- Section 3.5.2, “PortalBuilder Page Template Considerations,” on page 19
- Section 3.5.3, “PortalBuilder Deployment Considerations,” on page 19
- Section 3.5.4, “PortalBuilder Localization Support,” on page 19
- Section 3.5.5, “Different Character Sets (utf-8 Support),” on page 19
- Section 3.5.6, “SVG images in the Portal,” on page 20

3.5.1 Database Considerations

Currently, the Business Service Dashboard is validated to work with the Hypersonic-SQL database. The console allows you to change the Business Service Dashboard database definition, but Managed Objects recommends that you use the default definition provided at installation.

The Business Service Dashboard database is used to store page and portlet configuration data and Hypersonic-SQL provides optimal performance. For more information about creating database definitions, see the *Server Configuration Guide*.

NOTE: The Business Service Dashboard should be configured to use the Hypersonic-SQL database.

Validation for other supported databases will be considered in a future release.

3.5.2 PortalBuilder Page Template Considerations

If you switch your portal page configuration between the "portal" template and any other template, you might have to re-create your page. It is riskier to switch from the "portal" template to another template. Switching to the "portal" template usually retains the existing data. You can always switch back to the original template to regain original page layout.

3.5.3 PortalBuilder Deployment Considerations

If the Managed Objects server is shutdown before PortalBuilder finishes deploying and initializing all portlets, some portlets could be missing after the upgrade. This can be resolved by undeploying the portlet and then redeploying the portlet.

3.5.4 PortalBuilder Localization Support

Localization is not fully supported in this release of PortalBuilder, however some aspects of the reports can leverage language settings (such as date/time display).

3.5.5 Different Character Sets (utf-8 Support)

Pre-3.5 upgrade customers who want to use different character sets must follow the steps below, because these settings did not exist in versions prior to 3.5. The portal can be switched to allow utf-8 characters, such as Chinese characters, to be used as page titles, portlet titles, and links. Similarly, charts can be modified to allow for utf-8 characters.

To enable utf-8 encoding in the portal:

1. Edit the `jahia.properties` and `jahia.skeleton` files located in `ManagedObjects/webapps/portal/WEB-INF/etc/config` to add or verify that a property named `utf8Encoding` is set to True.
2. If changes are made, restart Managed Objects.

To enable utf-8 encoding in portal charts:

1. Convert a font capable of displaying characters, such as Chinese SimSun, using `ManagedObjects/image/bin/CordaFontConverter.exe`.
2. Change the text area's font style to the uploaded font using *Edit* mode in PortalBuilder for the particular portlet.
3. Restart the Image server.

3.5.6 SVG images in the Portal

Various portlets optionally rely on an SVG viewer to render images properly. For instance, the Layout portlet and toolkit component utilize this technology. In order to successfully use these portal features, portal users using Internet Explorer must install the Adobe SVG Viewer plug-in on their machine. IE prompts for installation during runtime, if necessary. However, portal users using Mozilla Firefox will not need to install a plug-in as the native SVG engine built into Mozilla will be used.

3.6 Business Service Level Manager Considerations

- Section 3.6.1, “Agreement Objectives,” on page 20
- Section 3.6.2, “How Missing or Unknown Data is Handled,” on page 20
- Section 3.6.3, “Store Suppressed or Real-time State Changes,” on page 20
- Section 3.6.4, “Data Consistency on Server and Warehouse Restart,” on page 21
- Section 3.6.5, “Killing the Managed Objects Server Can Cause Data Loss,” on page 21
- Section 3.6.6, “Rolling Objectives,” on page 21
- Section 3.6.7, “Showing Service Level Outage Root Cause,” on page 21

3.6.1 Agreement Objectives

We advise against creating Agreement Objectives that measure the same Agreement where the Agreement Objective is defined, as an infinite loop is created. Agreement Objectives are designed to measure agreements other than the one containing the Agreement Objective.

3.6.2 How Missing or Unknown Data is Handled

Missing or Unknown data is considered available when calculating availability and outage metrics.

In a future release, Managed Objects will provide the capability to configure how missing or unknown data is handled.

3.6.3 Store Suppressed or Real-time State Changes

Regardless of Data Warehouse settings (Data Warehouse element Data Warehouse property tab, System Settings subtab, Use suppressed element condition for performance data and Service Level calculations), the suppressed state is stored for all Historical Performance profiles that use condition-based expressions, except the Service Levels profile which stores real-time state of suppressed elements and suppressed state of impacted elements if this option is not selected, otherwise

The Data Warehouse suppressed condition setting will be fully supported in a future release.

3.6.4 Data Consistency on Server and Warehouse Restart

If multiple profiles are created with the same expressions for data capture (such as two profiles capturing element condition data), slight discrepancies can exist in collected data points whenever the Managed Objects server or the Data Warehouse is restarted. This occurs because profiles are restarted serially.

For example, one profile might show data at 12:01pm but another profile might not have data until 12:02 pm if the second profile started at 12:02 pm. If audit alarms are stored for profiles, it is possible to confirm this has occurred by checking the profile start times against the collected audit alarm data.

3.6.5 Killing the Managed Objects Server Can Cause Data Loss

If the Managed Objects server process is manually terminated rather than shutdown properly, there will be a loss of BSLM data. Be sure to use the `mosstop -shutdown` command to shutdown all Managed Objects services and the Managed Objects server to guard against losing any unnecessary data. Note that it could take several minutes to shutdown the server due to writing queued data to the backup repository.

For more information about shutting down the server, see the *Server Configuration Guide*.

3.6.6 Rolling Objectives

Rolling objectives are not currently supported. This issue will be addressed in a future release.

3.6.7 Showing Service Level Outage Root Cause

When the Managed Objects server or an adapter is restarted, an existing outage condition might continue if the affected element's current condition is considered an outage state and its last known state prior to stopping the server or adapter was an outage state. If this occurs, no Root Cause information for the outage is available in PortalBuilder SLA reports.

Root cause information will be enhanced to show greater details and description in a future release of Managed Objects.

3.7 Formula Event Data Store Database Initialization

If creating a Database Definition for the sole purpose of being a Formula Event Data Store (when the Business Service Warehouse schema is NOT selected), it is necessary to manually initialize the database after the definition is created. If the Business Service Warehouse schema is also selected in the definition, database initialization is automatic.

For more information regarding creating and initializing databases, see the *Server Configuration Guide*.

3.8 Alarm Date/Time Discrepancy

If server time is different from the management system versus Managed Objects, then the date/time associated with incoming alarms could be inconsistent with the Managed Objects receipt time. This can happen in cases of having management servers in a different time zone or just being behind/ahead of the Managed Objects server.

By default, alarm date/time is taken directly from the alarm information. The UseAlarmTimesForCondChanges adapter property can be modified, on appropriate adapters, to use the date/time that the alarm is received by the Managed Objects server.

However, if feeding in a batch of old alarms, the date/time that the alarms actually occurred is probably more important. Similarly, if storing alarm information, it is probably more important to record the properties based on the alarm time versus the time that Managed Objects received the alarm. However, element condition and element condition change values are affected when Managed Objects receives the alarm.

The UseAlarmTimesForCondChanges option is available for the following adapters:

- BMC Software PATROL Enterprise Manager®
- Cisco Info Center®
- IBM Micromuse Netcool
- IBM Tivoli T/EC®
- IBM Tivoli T/EC+
- Managed Objects Event Integrator™
- Managed Objects FormulaScript™

For further information on specific adapters and associated adapter properties, see the *Adapter and Integration Guide*.

3.9 ConfigStore

If using Windows Server 2008 R2, do not run moscfg while the Managed Objects Server is running. Stop the Managed Objects Server, then run moscfg.

The following consideration applies to using ConfigStore in a clustered environment:

- While using Managed Objects in a clustered environment, you may see the following error in the logs when adding adapters to nodes. It is safe to ignore this error. This error will be fixed in a future version of Managed Objects.

  ```
  2010-01-25 12:06:12,688 ERROR Server - Class name missing from [Adapters]
  in IniFile facade for adapters=Adapters/root=Administration Adapters.ini;
  skipping.
  ```

  ```
  2010-01-25 12:06:12,688 WARN Adapter.Meta.Container Connections - Cannot
  load adapter from data: Adapters
  ```

3.10 Performance Considerations for Console Configurations

There can be performance implications related to activating Show nonsource element indicators and Show linked element indicators options in the Explorer pane. There can be significant overhead for these options when expanding elements that have more than 100 element children.

We recommend using these options only when required and turning them off for daily use.

3.11 myMO Considerations

The following technical considerations apply to myMO:

- Managed Objects server user accounts are leveraged by myMO to grant user access to myMO portal pages and Managed Objects data via myMO portlets. If the e-mail address of a user in Managed Objects is invalid, then the user will not synchronize. If myMO is unable to synchronize a user account for this reason, a notification occurs alerting that the email address must be updated.
- While myMO can be internationalized, not all language packs are included. To localize to a specific language that is not currently implemented, contact Novell support.
- It is necessary to use Flash, PNG, or JPG formats in Chart Builder when using Firefox to access myMO.
- Liferay Password Policies settings for Password Lockout and Password Expiration are unsupported by myMO.

For further information on myMO, see the *myMO Guide*.

3.12 myCMDB Considerations

When the Managed Objects server is restarted, myCMDB must be restarted in order for the connection between Managed Objects and myCMDB to be reestablished.

3.13 Java Related Known Issues

ArrayIndexOutOfBoundsException errors have occurred in the Managed Objects console when deleting and highlighting text in alarm columns. This error is harmless and will be fixed in a future release of Managed Objects.

3.14 Installation and Upgrade Considerations

Managed Objects customers can upgrade directly from 4.5.x or 4.6.x to 4.7. Customers running prior versions must upgrade to 4.0 before upgrading to 4.5, and lastly to 4.7.

The following modified behaviors and known technical considerations apply to Managed Objects 4.x.

- Section 3.14.1, “Business Service Warehouse Upgrade Considerations,” on page 24
- Section 3.14.2, “myMO Upgrade Considerations,” on page 24
- Section 3.14.3, “Remote Container Upgrade Considerations,” on page 24

- Section 3.14.4, “Database Support,” on page 25
- Section 3.14.5, “Increased Minimum Recommended Memory Requirements,” on page 25
- Section 3.14.6, “JREs,” on page 25
- Section 3.14.7, “Managed Objects License File Management,” on page 26
- Section 3.14.8, “Modified Default System Behavior,” on page 26

3.14.1 Business Service Warehouse Upgrade Considerations

If you have a very large warehouse database or require assistance with your upgrade process, there are a number of options available for ensuring a smooth and efficient upgrade. Please contact Novell Technical Support (http://support.novell.com/) for assistance regarding recommended upgrade procedures prior to upgrading.

NOTE: Please contact Novell Technical Support (http://support.novell.com/) if you require assistance in upgrading your Business Service Warehouse.

3.14.2 myMO Upgrade Considerations

myMO has been upgraded from Liferay 4.2.1 to 5.2.3 for its portal platform. As a result of this upgrade, the following must be considered when upgrading myMO to v4.7:

- The Managed Objects portlets will upgrade automatically.
- Portlets supplied by Liferay may have been decomissioned or renamed. While upgrades occur on a case-by-case basis, the user must remove portlets that do not upgrade successfully from pages and replace with the new portlets if available.

  The following portets have been decomissioned by Liferay: Location Admin (40), Organization Admin (80), Mail (1), Chat (52), Alfresco Content (91), Games (14), Words (37), Calculator (13), Google (35), AdSense (94), Google Gadget (95), Google Maps (96), News (5), Amazon Rankings (67), Shopping (34), Test Flash (53), Test Hello Laszlo (69), Test Reports, Test Web Proxy (66), Analog Clock (65), CSZ Search (17), Maps (18), Countdown (81), Theme Gallery (38), WSRP Proxy (68), Workflow (93).

  The Journal, Journal Articles, and Journal Content portlets have been replaced by the Web Content List and Web Content Display portlets. The Announcements portlet has been replaced by Alerts and a new Announcements portlet, however we recommend using the Web Content portlets instead as they allow more than one instance to be added to a page.
- The myMO “look & feel” has been update and previous templates developed on myMO are no longer supported. On upgrade, the community pages default to the new *myMO Simple* theme. Third-party themes can be reinstalled and redeployed if there is a Liferay 5.2.3 version available. Custom theme must be upgraded to be compatible with Liferay 5.2.3 before they can be redeployed.

3.14.3 Remote Container Upgrade Considerations

If running a remote container and upgrading Managed Objects, it is necessary to reinstall the remote container as there is no upgrade process for feature. For more information about installing and configuring remote containers, see the *Adapter and Integration Guide*.

3.14.4 Database Support

This section outlines known technical considerations when configuring and using the following databases for use with Managed Objects, Business Data Integrator (BDI), Business Experience Manager (BEM), Business Service Dashboard, Business Service Level Manager (BSLM), Event Integrator (EVE), and SNMP Integrator.

Hypersonic-SQL

Hypersonic-SQL is required for use with the Business Service Dashboard. It is an in-memory database that provides optimized performance for handling portal configuration data. The default database definition for the Business Service Dashboard is already configured to use Hypersonic-SQL.

Hypersonic-SQL does not support the SNMP Integrator, so it is recommended that you choose another database for the Formula Event Data Store, if you are using the SNMP Integrator.

3.14.5 Increased Minimum Recommended Memory Requirements

The minimum recommended Managed Objects server (or JVM) memory requirements increased from 512 megabytes to 1 gigabyte. This increase is necessary to ensure optimal performance.

For more information regarding memory requirements and configuration, see the *Server Installation Guide*.

3.14.6 JREs

Managed Objects v4.7 requires JRE 1.6.0_17 for the server and the client. The following table details the Java Runtime Environment versions that are validated for use with Managed Objects v4.7 for each operating system.

Table 3-1 *JREs Validated for use with Managed Objects Server*

Operating System	Managed Objects JRE Version	Vendor
AIX	SDK Java6	IBM
HP-UX 11i	JDK 6.0.05	HP
Linux	1.6.0_17	IBM, Sun
Solaris	1.6.0_17	Sun
Windows	1.6.0_17	Sun

To download a compatible JRE, go to http://java.sun.com/javase/downloads/index.jsp (http://java.sun.com/javase/downloads/index.jsp)

Appropriate patches must be applied to the operating system you are running to make it compatible with the JRE. The following table lists manufacturers' URLs to obtain patch information for each operating system.

Table 3-2 OS Patch Information Links

Operating System	See…
Solaris	http://sunsolve.sun.com/show.do?target=patchpage (http://sunsolve.sun.com/show.do?target=patchpage)
HP-UX	https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXJAVAHOME (https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXJAVAHOME)
AIX	http://www-106.ibm.com/developerworks/java/jdk/aix/service.html (http://www-106.ibm.com/developerworks/java/jdk/aix/service.html)

If you are installing Managed Objects on a 64-bit host, you must download and install the appropriate 64-bit JRE before installing Managed Objects. Download the 64-bit JRE from the following site: http://java.sun.com/javase/6/webnotes/install/system-configurations.html (http://java.sun.com/javase/6/webnotes/install/system-configurations.html).

After installing the 64-bit JRE, install Managed Objects v4. Launch the Configuration Manager and specify the path to the location of the downloaded 64-bit JRE in the JRE field.

3.14.7 Managed Objects License File Management

During the installation process, the specified license key is placed in the `ManagedObjects/config` directory. When a new license is issued for Managed Objects software, it must be manually saved to the `ManagedObjects/config` directory since the Configuration Manager no longer supports a license key setting.

3.14.8 Modified Default System Behavior

- "Renamed Organizations and Geography Root Elements" on page 26
- "Suppression Option to Affect an Entire Hierarchy" on page 26

Renamed Organizations and Geography Root Elements

In Managed Objects v4, the Organizations and Geography root elements are renamed to Service Models and Locations, and are placed under the Services root element. However, they are still referenced by their old DName in order to retain backward compatibility.

Suppression Option to Affect an Entire Hierarchy

In Managed Objects v4, element suppression behavior is modified to affect the entire Service element hierarchy and not only an element's immediate children. There is a system property that controls this behavior. Set `OnlySuppressOrgChildrenOneLayerDeep=true` to only suppress one level deep.

This change only affects services elements located under the Services root because the adapter elements under the Elements tree always suppressed all children.

Discontinued Support

4

As an enterprise tool, Managed Objects™ supports the following:

- Specific operating systems on which the Managed Objects server can be installed
- Client platforms for accessing Managed Objects
- Databases to configure for storing Managed Objects data
- Tools and other management systems which supply data to Managed Objects

To meet the ever changing business needs, Managed Objects is continually enhanced, including the inclusion of new adapters for connecting to other management systems. As a result, older versions of the product, as well as specific features, are periodically retired.

In Managed Objects v4.7, the following are no longer supported:

- Red Hat Linux 4.0
- Microsoft Internet Explorer (IE) 6.x
- Oracle 9

For information regarding supported versions of third-party management systems, databases, and other software relevant to Managed Objects, see the *Deployment Guide*.

This section contains information about the discontinued support of operating systems, client platforms, databases, Managed Objects releases, and certificates:

- Section 4.1, “Third Party Software Maintenance Support,” on page 27
- Section 4.2, “Operating Systems,” on page 28
- Section 4.3, “Clients Platforms,” on page 29
- Section 4.4, “Databases,” on page 30
- Section 4.5, “Retired Adapters,” on page 31
- Section 4.6, “Retired Adapters,” on page 33
- Section 4.7, “Software Signing Certificates,” on page 33

4.1 Third Party Software Maintenance Support

Managed Objects validates the use of new versions of third party products that integrate with a Managed Objects product based on availability of product and customer need. Major versions of third party products are validated within six months of release, based on availability of product and customer need. Minor versions of third party products are validated based on availability of product and customer need. Not all minor versions are officially validated. Service pack versions of third party products are validated based on availability of product and customer need. Service pack versions are not typically validated unless deemed necessary to ensure product integration functionality.

Support is withdrawn on older versions of third party software that integrate with Managed Objects, based on third party support of the software and customer need. Customers are notified at least six months in advance when support for third party products will be withdrawn.

If Managed Objects is used in conjunction with an unsupported version of a third party software, Managed Objects makes every effort to assist with reported issues. However, Managed Objects cannot guarantee that reported issues will be addressed or resolved. It is strongly recommended that Managed Objects always be used with the versions of the third party products specified in the Managed Objects documentation.

4.2 Operating Systems

Managed Objects releases after the dates shown in Table 4-1 will discontinue support for the listed operating system versions:

Table 4-1 *Discontinued Operating Systems*

Operating System	Version	No Support for Releases after:	Notes
AIX	4.3.3	June 30, 2003	MO v3.1.1, released in April 2003, was the last release to support AIX 4.3.3.
	5.1	April 1, 2006	MO v3.5.1, released in October 2005, was the last release to support AIX 5.1. This date coincides with IBM's scheduled date to withdraw support for AIX 5.1. IBM does not support JRE 1.5 on AIX 5.1.
	5.2	February 29, 2008	MO v4.5, released in February 2008 was the last release to support AIX 5.2.
HP-UX	10.20	September 30, 2003	MO v3.2.1, released in December 2003, was the last release to support HP-UX 10.20.
	11.0x	October 15, 2005	MO v3.5, released in April 2005, was the last release to support HP-UX 11.0x. HP-UX 11.0x does not support JRE 1.5.
Red Hat	Linux 2.1 SUSE 8.0	September 2006	MO v4.0, released in September 2006, was the last release to support Red Hat Linux 2.1 SUSE 8.0
	Linux 3.0	February 29, 2008	MO v4.5, released in February 2008 was the last release to support Red Hat Linux 3.0.
	Linux 4.0	June 30, 2009	MO v4.6, released in June 2009 was the last release to support Red Hat Linux 4.0.
Solaris	2.5.1	September 30, 2003	MO v3.2.1, released in December 2003, was the last release to support Solaris 2.5.1.
	2.6	December 1, 2004	MO v3.4, released in November 2004, was the last release to support Solaris 2.6.
	2.7	December 1, 2004	MO v3.4, released in November 2004, was the last release to support Solaris 2.7.
	8.0	June 2007	MO v4.x, released in June 2007, was the last release to support Solaris 8.0

Operating System	Version	No Support for Releases after:	Notes
Windows	NT 4.0	September 30, 2003	MO v3.2.1, released in December 2003, was the last release to support Windows NT 4.0.
	2000	February 29, 2008	MO v4.5, released in February 2008 was the last release to support Windows 2000.

4.3 Clients Platforms

Managed Objects releases after the dates shown in Table 4-2 will discontinue support for the listed client access methods and versions:

Table 4-2 *Discontinued Client Access Methods*

Client Access Method	Version	No Support for Releases after:	Notes
Java Plug-In Client	N/A	March 30, 2003	MO v3.1.1, released in April 2003, was the last release to support the Java Plug-In Client.
Thick Client launch mechanism	N/A	March 30, 2003 (Windows, Solaris, Linux) October 28, 2005 (AIX and HP-UX 11.0)	The default client is now the Web Start Console. As of MO v.3.5, only AIX and HP-UX 11.0 still use the old “thick” client launch mechanism, due to JRE version limitations. As of MO v4.0, all installations use the Java Web Start Browser.
JVM	1.3.x	June 30, 2003	MO v3.1.1, released in April 2003, was the last release to support JVM 1.3.x.
	1.4.x	October 28, 2005	MO v3.5.1, released in October 2005 was the last release to support JVM 1.4.x.
Microsoft Internet Explorer (IE)	5.5	September 2006	MO v4.0, released in September 2006, was the last release to support Console access using IE 5.5.
	6.x	June 30, 2009	MO v4.6, released in June 2009, was the last release to support Console access using IE 6.x.
Microsoft IE JVM	All	September 30, 2002	MO v3.1.0, released in September 2002, was the last release to support Console access using IE JVM.
Mozilla Firefox	2.0	February 29, 2008	MO v4.5, released in February 2008 was the last release to support Console access using IE 6.0.

Client Access Method	Version	No Support for Releases after:	Notes
Netscape	4.7	September 25, 2003	MO v3.1.1, released in April 2003, was the last release to support Console access using Netscape 4.7.
	6.0	September 1, 2005	MO v3.5, released in April 2005, was the last release to support Console access using Netscape 6.0.
	6.2	September 2006	MO v4.0, released in September 2006, was the last release to support Console access using Netscape 6.2.

4.4 Databases

Managed Objects releases after the dates shown in Table 4-3 will discontinue support for the listed database versions:

Table 4-3 *Discontinued Database Product Versions*

Client Access Method	Version	No Support for Releases after:	Affected Components:
IBM DB2	7.2	October 2005	Affects all database components. MO v3.5, released in April 2005, was the last release to support 7.2.
	8.1	October 2005	Affects all database components. MO v4.0, released in September 2006, does not support 8.1.
Microsoft SQL	7.x	October 2005	MO v3.5, released in April 2005, was the last release to support 7.x.
Microsoft SQL Server	2000	Managed Objects v4.5 (February 2008)	Affects all database components. MO v4.0 is the last release to support SQL Server 2000.
Oracle	8i	February 2008	Affects all database components. MO v4.0, released in September 2006, is the last release to support 8i.
	9	June 2009	Affects all database components. MO v4.6, released June 2009 was the last release to support 9.

Client Access Method	Version	No Support for Releases after:	Affected Components:
Sybase	11.9.2	October 2005	Affects all database components. MO v3.5, released in April 2005, was the last release to support 11.9.2.
	12.0.x	October 2005	Affects all database components. MO v4.0, released in September 2006, does not support 12.0.x.

4.5 Retired Adapters

Managed Objects releases after the dates shown in Table 4-4 will discontinue support for the listed discovery tools and network management systems (NMS) versions. For a list of discovery tools and NMS adapters that have been retired, see Section 4.6, "Retired Adapters," on page 33.

Table 4-4 *Discontinued Discovery Tool and NMS Versions*

Network Management System	Version	No Support for Releases after:	Affected Adapter/ORB
Managed Objects Business Technology Insight (BTI)	2.0.x, 3.0	October 2005	MO v3.5.1, released in October 2005 was the last release to support BTI 2.x and 3.0 BTI Adapter, nLayers adapter
Managed Objects Business Technology Insight (BTI) (nLayers Insight)	3.1	October 2005	MO v3.5.1, released in October 2005 was the last release to support BTI 3.1 BTI adapter, nLayers adapter
	4.5	July 2008	MO v4.5, released in February 2008 was the last release to support 4.5
BMC Mastercell	2.1.2, 3.0, 3.1	October 2005	MO v3.5.1, released in October 2005, was the last release to support BMC Mastercell 2.1.2, 3.0, and 3.1. BMC Event Manager adapter replaces the BMC Mastercell adapter.
BMC Remedy	4.x	October 2005	MO v3.5.1, released in October 2005, was the last release to support BMC Remedy 4.x.
Cisco Info Center	3.4.x	October 2005	MO v3.5.1, released in October 2005 was the last release to support Cisco Info Center 3.4.x.
Computer Associates Spectrum	6.x	October 2005	MO v3.5.1, released in October 2005 was the last release to support Computer Associates Spectrum 6.x.
	6.0.x, 6.5, 6.6	September 2006	MO v4.0, released in September 2006 was the last release to support 6.0.x, 6.5, 6.6

Network Management System	Version	No Support for Releases after:	Affected Adapter/ORB
Computer Associates Unicenter	2.4	October 2005	MO v3.5.1, released in October 2005 was the last release to support CA Unicenter 2.4.
HP OpenView (ITO) VantagePoint Operations	A.06.xx	December 31, 2003	MO v3.2.1, released in December 2003, was the last release to support HP OpenView Operations A.06.xx.
			HP OpenView Operations for UNIX Adapter; OVOORB
HP Network Node Manager (NNM)	6.0.x, 6.1	April 25, 2005	MO v3.5, released in April 2005 was the last release to support HP NNM 6.0.x, 6.1.
			HP Network Node Manager® Adapter, OvORB
	6.2	December 31, 2006	MO v4.0, released in September 2006 was the last release to support 6.2
			HP Network Node Manager Adapter, OvORB
	6.3	December 31, 2006	MO v4.0, released in September 2006 was the last release to support 6.3
			HP Network Node Manager Adapter, OvORB
	6.4	December 31, 2007	MO v4.0, released in September 2006 was the last release to support 6.4
			HP Network Node Manager Adapter, OvORB
IBM Tivoli Enterprise Console (T/EC)	3.6.x	September 30, 2003	MO v3.2.1 released in December 2003, was the last release to support IBM Tivoli T/EC 3.6.x. IBM Tivoli Enterprise Console (T/EC™) and IBM Tivoli Enterprise Console (T/EC)+, Database Edition Adapters; TecORB
	3.7.x	March 30, 2005	MO v3.4, released in November 2004 was the last release to support 3.7.x
			(T/EC)+, Database Edition Adapters; TecORB
	3.8	October 2005	MO v3.5.1, released in October 2005, was the last release to support T/EC 3.8.
IBM Tivoli NetView	6.0.x	September 30, 2003	MO v3.2.1, released in December 2003, was the last release to support IBM Tivoli NetView 6.0.x.
			IBM Tivoli NetView Adapter; NvORB
	7.0, 7.1, 7.11, 7.12, 7.13	October 2005	MO v3.5.1, released in October 2005 was the last release to support IBM NetView 7.0, 7.1, 7.11, 7.12, and 7.13.
Managed Objects Business Technology Insight	4.5	July 2008	MO v4.5, release in February 2008 was the last release to support Managed Objects BTI 4.5.

Network Management System	Version	No Support for Releases after:	Affected Adapter/ORB
Microsoft Operations Manager	2000	October 2005	MO v3.5.1, released in October 2005 was the last release to support MOM 2000.
NetIQ AppManager	4.0.x	March 1, 2005	MO v3.4, released in November 2004 was the last release to support NetIQ AppManager 4.0.x
	4.3, 5.0.x	October 2005	MO v3.5.1, released in October 2005 was the last release to support NetIQ AppManager 4.3 and 5.0.x.

4.6 Retired Adapters

A number of adapters are no longer validated for use with the current Managed Objects server due to vendors discontinued support for older products. Table 4-5 lists the retired adapters:

Table 4-5 *Retired Adapters*

Management System	Discontinued Version	Comments
BMC Software MAX/ Enterprise	4.0	Even though it appears as an adapter option in the adapter list, the BMC Software MAX/Enterprise Adapter is not validated to work with version 4.0 and later.
ConnectPoint LinkXchange	3.0	Even though it appears as an adapter option in the adapter list, the ConnectPoint LinkXchange Adapter is not validated to work with version 3.0 and later.
BMC Mastercell	4.0	As of 4.0, the adapter no longer appears as an adapter option in the adapter list. The BMC Event Manager adapter replaces this adapter in 4.0.

4.7 Software Signing Certificates

Certificates are signatures by vendors to indicate that they are the owner of a set of code or an application. Some companies only run software that is digitally signed. Managed Object Solutions signs its software for all product releases, including major and minor releases, as well as service pack releases:

- Major releases are certified for two years from the GA ship date. Certificates issued expire within two years of their issuance.
- Minor releases are certified using the same certificate as the major release. The exception is that minor releases shipped more than six months after the major version GA date are issued a new signing certificate that is valid for two years from the GA ship date.
- Service pack releases are certified using the same certificate as the release it services (such as major or minor).

Table 4-6 provides information regarding certificate expiration:

Table 4-6 *Certificate Expiration*

Product Version	Certificate Expiration Date
Formula 3.4	September 8, 2006
Formula 3.5	March 3, 2007
Formula 3.5.1	March 3, 2007
Managed Objects 4.0	May 12, 2008
Managed Objects 4.5	October 14, 2009
Managed Objects v4.6	April 10, 2011
Managed Objects v4.7	December 11, 2011

Managed Objects does not re-sign previous GA release software. Software that has an expired certificate typically runs without issues, except that the user is warned beforehand that the signing certificate has expired, meaning the certificate can no longer be used for signing. This has nothing to do with the validity of the software code; once the code is signed, it remains valid indefinitely.

Enhancements and Resolved Issues

5

The following enhancements and resolved issues are included with Managed Objects 4.7:

- 16704 Shutting down BEM adapter does not terminate communications with Monitor
- 16708 GUARD: don’t see exact element tree on the high side as we would see on low side (SR# 11270)
- 16713 BEM:Won't start after shutdown errors
- 17140 MOM:Adapter would not reconnect properly after losing its connection
- 17557 BEM:Problems with Oracle on latest May Bundle patches
- 19574 Portal: SLA Reports: Complete changes for key metric display (Part 1 of 3) (SR# 15476)
- 20530 Config: Tracking: Property compare functionality is not working as expected
- 20713 Config: Tracking: Property compare functionality is not working as expected
- 20865 Add the ability to drill down to children from the top level report to display real-time queries (SR# 16429)
- 20927 BEM: https test fail on certificate error
- 21042 Daemon: Startup of daemon fails but no logs createdto explain why
- 21061 RemoteContainer: Cannot run the rightclick IMport Configuration on Patrol Adapter
- 21341 EVE: 351 to 40 Upgrade shows EVE not working at all
- 21492 BEM: Installer issue: need help starting BEM processes on Solaris 9. (SR# 17139)
- 21568 Intermittent re-start of netcool adapter (SR# 17872)
- 21621 Currency: Official support for Oracle 11g
- 21630 Eve Adapter: Does not handle custom "severity" field
- 21833 BEM: Sunset the Adapter property de-duplicate alarm
- 21834 Currency: Official support for Remedy 7.1
- 21879 Currency: Official support for HP NNMi V8.0 for Windows
- 22103 Security: Password pattern does not work in this instance - which may be needed at some point
- 22352 Client: Failing to import Service Models with layout views
- 22453 SMARTS adapter does not capture alarms intermittently (SR# 19441)
- 22588 Currency: Support for Sybase 15
- 22630 Currency: Support for SQLServer 2008
- 22676 Chinese character display error on the layout portlet
- 22746 Currency: Support for CA Spectrum v9.0
- 22910 unknown classname from the BEM triggers massive warning messages (SR# 19359)
- 23117 SLA compliance status report portlet bug (SR# 20292)

- 23402 myMO: ERROR ConditionSummaryTableBean - Unexpected exception ocurred (SR# 20531)
- 23464 Portal: Performance Portlet - Multiple Data Sources cause point annotation (SR# 20786)
- 23480 BDI: Lose connection to mysql database via BDI when using 1.6 client jre or the 1.5_15 server jre. (SR# 20804)
- 23482 Element matches re-homed to the Enterprise root if the original root element is deleted (SR# 20807)
- 23499 Alarm Operation show internal operations when using F2F adapter (SR# 20405)
- 23523 Currency: Official support for HP OVO V8.0
- 23537 BSCM generates unwanted objects (SR# 19261)
- 23562 BSLM: Allow users with view permission see the SLA tab (SR# 20607)
- 23563 Alarms do not roll up via ORG links defined via BDI adapter (SR# 20307)
- 23571 Layout view: when I align multiple circles, it shrinks the size of one of the circles (SR# 15799)
- 23575 Layout: when I highlight a circle and choose highlight in source view, then go back to preview, the circle resizes
- 23581 Access control errors when having groups with similar names (SR# 20609)
- 23608 Netcool Adapter: Observed ArrayIndexOutOfBoundsException (SR# 20616)
- 23638 MetaModel property: Choosing Percent (%) Function causes error for source field values of zero... (SR# 17542)
- 23641 NNM Adapter: Perform Operations by Script (WARN Message log) (SR# 20018)
- 23713 Relationship Browser: Can't reset user default preset (SR# 17494)
- 23727 Removed elements are back after restarting MO Server (SR# 20426)
- 23738 Nullpointer Execption Tideway adapter (SR# 20877)
- 23743 BSCM: Error when retrieving historical change alarms (SR# 20842)
- 23828 org with matched children returning different output in the server vs client operation (SR# 20590)
- 23841 text on labels are not dispalyed properly in toolkit and portal when using certain nodestyles (SR# 19803)
- 23882 Alarm Operation show internal operations when using F2F adapter (SR# 20405)
- 23891 ConfigStore: Ability to turn off Version Tracking (SR# 20887)
- 23893 Client: NPE on Database tab and unable to create a new defintion using latest 1.6JRE
- 23913 myCMDB: Merge issue in SessionImpl pushEvents
- 23967 BDI: trying to run the hierarchy editor with java 1.6 client throws buffer error
- 24058 GUARD: Location of Guard files not what the customer needs?
- 24101 On server startup, algorithms loading throws an NPE
- 24157 DTDS: www.ManagedObjects.com/dtds needs changed to www.Novell.com/dtds
- 24184 startup time for MO (and msocfg) affected adversely with ver history tracking
- 24192 Spectrum Adapter does not properly build links and link states

- 24339 BSCM: Right clicks for "Generate Now" are not available and Service Configuration right click moved.
- 24566 SCOM2007-R2 adapter performance.
- 24588 BSCM: dependency generator doesn't work for alarm source over F2F/Remote Container
- 24608 Relay: Connection interruption in UDP connection causes infinite loop.
- 24612 Netcool Adapter: Needed to restart server to re-establish connection to Netcool server (SR# 20789)
- 24613 exportcfg creates a file without an ending newline
- 24614 excluded show impact fails with Dec and Feb
- 24615 Datawarehouse: Comments disappear with purge job - even non-scheduled ones
- 24616 Warnings about filtered alerts fill log file
- 24618 Client: Inactivity Timeout parameter needs to be implemented
- 24619 imported BSCM job from 4.0 to 4.5 is blowing up formula-eating memory
- 24620 Formula Server cannot load getting "WebServer not supported"
- 24621 Display time is taken from Use Date Range, not from Use Interval.
- 24622 Eve agent file tail sometimes fails when using read last X number of lines option
- 24623 Eve alarms have wrong date/time stamp when using usedatetime alarm server parameter on accumulated alarms
- 24626 The box around our toolkit svg graphics are hard coded with a 10% border.
- 24633 BEM v4.5 test scenario not relecting current results in aggregate. (SR# 20551)
- 24635 PEM adapter needs a setting for having Ack affect the condition
- 24636 Class Relationship Template fails in BSCM with merge policy
- 24637 UBS has import/export issue that configstore ver history tracking may be interfering with.
- 24638 Blackout calendars disappear after parent element is renamed
- 24640 Clearing of EVE alarms not displaying properly
- 24641 Eve agent sources do not support udp connection
- 24642 myMO alarms portlet displays incorrect time (1 hr off) from console and server
- 24643 Historical Alarm queries generate MO console exception ... with NULL on F2F
- 24645 SLA Calculations seem to stop after altering SLA profile
- 24646 4.5 BSCM crashing servers - Cluster environment
- 24647 client-server communication broken when client is run using Java 1.6.0_10
- 24648 BSCM matchers takes too long on deep source trees
- 24649 myMO: Navigation/Search Portlet NOT driving Layout portlet - unless you refresh the page
- 24650 MyMO Layout portlet errors when set to drive alarm portlet (V4.5)
- 24651 Timeout occurred during the login to the server
- 24652 Null Pointer Exception generated when viewing Layout Portlet

- 24653 Nodestyle not maximized on layout portlet and top of some nodestyles are cutoff if 'Scale/Layout checkbox not checked.
- 24664 Database: Native adapters which can chart performance data do not work if BSW not started
- 24679 Guard: The guard adapter will not support the SNMPc adapters without default names
- 24700 SMARTS adapter not deleting CLEAR alarms after processing
- 24701 Netcool adapter is frequently missing IDUC cycles.
- 24781 BSW creation script error when choosing Sybase for BSW database in 4.60SUP
- 24825 BSCM throws CORBA error when retrieving alerts.
- 24826 anyscript placed into org element is truncated and split into matched tab
- 24866 myMO Navigator Portlet window to have controllable height
- 24867 upgrade portlet showing invalid data
- 25029 disappearing ACKed alarms in PEM adapter
- 25030 Problem with adapter to PEM-lost events
- 25031 Impact Report command is not reporting all alarm delete events
- 25032 myMO performance Issues with IO errors in myMO trc <--errors my not be related
- 25033 Reloading servers, one server did not read any relationships
- 25034 two extra web client sessions created upon logging in to myMO
- 25035 Duplicate data in database when clustering is used.
- 25036 ORA-02291 during config ImportExport
- 25039 Maintenance of MOM server causes flood of jTDS failures
- 25040 Exception in thread "Worker thread for NetcoolAdapter killing the MO server
- 25043 SVG Layout portlets on myMO and MO BSD portal not displaying relationships correctly.
- 25097 HP Service Center: integration seems to be causing HP Service Center to leak connections
- 25098 Named relationships built using metamodeling not appearing in Relationship browser
- 25205 MO Client maximum retry attempts setting required
- 25206 ACL changes on large service models causes MO to become unstable
- 25207PortalBuilder: security enhancement to trap expired logins
- 25208 Client right click to add comment to an alarm requires define permission, but shoud be manage permission
- 25285 HP ServiceCenter: Enhancement requested to allow customer to provide custom wsdl files for integration
- 25286 HP ServiceCenter: data mining failure when large amount of data is being mined
- 25371 F/X Monitor will not connect to URI sources
- 25372 Eve agent file tail sources do not recognize file overwrites with 4.5 August bundle
- 25374 Enhancement: BSCM: Only 1 element created by BSCM when all BDI elements have same name but different dnames.
- 25442 User ACLS not being saved to configstore

- 25443 Random Database errors. SLA engine not storing outage in DB.
- 25513 After resetting time zone on server, any SLA queries against affected date result in unanswerable query
- 25527 Install: Upgrade from 4.5 to 4.7 causes problem with Hierarchy file location.
- 25596 filter out files to pull into configstore such as hs_err* ore core* files
- 25597 Client profiles with multiple windows not being saved
- 25598 filter out files to pull into configstore such as hs_err* ore core* files
- 25599 Tooltips no longer functioning as they did prior to upgrade.
- 25645 myMO: Element Properties portlet displays properties in a Horizontal fashion and info is way too long
- 25687 Drawing shortcut for SVG not working in myMO 4.7 (SR# 20675)
- 25790 Setting Server Default Time Zone in Jobs Dialog (SR# 17587)
- 25792 On going problems with new SCOM version and MOM adapter managing alarms.
- 25798 SCOM: Alarms disappear by a Hierachyfile change
- 25799 Client: Find is not working with elements having name with numeric values only.
- 25802 Database: Incorrect syntax near ')'. with SQL Server 2008
- 562675 BEM v4.5 test scenario not relecting current results in aggregate (Raytheon testbed) (SR# 20551)
- 562678 myMO: Navigation/Search Portlet NOT driving Layout portlet - unless you refresh the page
- 562682 BSW creation script error when choosing Sybase for BSW database in 4.60 SUP
- 562693 HP Service Center: integration seems to be causing HP Service Center to leak connections
- 562697 Web2Connect: Element Operation Invocation Broken.
- 562702 myMO:Element properties portlet is unavailable while adding the portlet
- 562703 myCMDB: Provide a SAP plugin for myCMDB
- 562706 Patch for TADDM 7.1.2 to work with MO
- 563203 Guard: Lowside controller not starting
- 567053 NNMi: Topology Maps status is always Unknown (CR #25568 back merge to 4.6)
- 567561 myMO: If an e-mail address is put in the username field then the user is not synchronized from MO to myMO
- Bug 568429 - [REGR] TEC+ : ArrayIndexOutOfBoundsException when starting adapter
- 569994 BSW creation script error when choosing Sybase for BSW database.
- 569996 Netcool - ArrayIndexOutOfBoundsException if "add to journal" entry is too long
- 569998 Receive bind error when trying to open a built layout view
- 570001 Datawarehouse stops writing when Cluster Coordinator changes
- 570003 EVE adapter not respecting the "do not close rule" property
- 570009 Client:BSCM:Schedule Date/Time settings not getting saved.
- 570011 BSCM: Error by clicking Cancel buttion in the 'Generating Views Window'.
- 570014 anyscript placed into org element is truncated and split into matched tab

- 570016 Client right click to add comment to an alarm requires define permission, but shoud be manage permission
- 570017 Window Layout Not Correct Getting Bookmark Errors
- 570018 Customer needs script to shut down or restart web server
- 570019 Two BDI connections are down
- 570020 BEM: ORA-12899: value too large for column "BEM"."APM_EVENTS_TAB"."DESCRIPTION
- 570021 Warehouse - Exception: ORA-12899: value too large for column "FORMULA"."BSAROOTCAUSEREASONS"."REASON" (actual: 3175, max
- 570022 myMO: Patch Install: ERROR Portlet is described in liferay-portlet but does not have a matching entry in portlet.xml
- 570080 Cannot login into the remote container after August 4.5 bundle
- 570081 Guard XML file element inconsistency
- 570085 Client: Summary View broken for metamodel properties being filled in