HP Operations Manager
Version 9.0

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Agenda

• Drivers /Key features
• Selected new features of OMu9
  • Policy Types
  • Policy exchange between platforms
  • “Cockpit View”
• Supported platforms and integrations
• Shipment and media kit / Licenses
• Migrating to OMu 9
Key drivers for Operations Manager 9
Key drivers for the OM 9 (comp. to OMu8)

1. **New Administration UI**
   - Replace Motif UI with web based technology
   - Multiple admin capabilities

2. **Alignment/Convergence with OMW**
   - Aligned support of policy types, policy versioning & category based instrumentation
   - Transition from templates to policies simplifies SPI integration & migration

3. **Set of key new features and enhancements** like
   - De-coupled OML server software installation & configuration
   - Performance improvements and better message throughput
   - Database supports UTF8 & RMAN backup and restore

4. **Technology dependency cleanups**
   - New integration strategy with NNM
   - DCE technology removed from management server
Alignment/Convergence with OMW

- Common agent policy types
- Policy versioning
- Category based instrumentation/deployment
- Same SPI service discovery paradigm as OMW
- Policy exchange with OMW

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Latest</th>
<th>Smart Placement</th>
<th>Categories/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>apobserver</td>
<td>1.0</td>
<td></td>
<td>apobserver not running</td>
</tr>
<tr>
<td></td>
<td>alarmen</td>
<td>1.0</td>
<td></td>
<td>alarmen not running</td>
</tr>
<tr>
<td></td>
<td>All SiteScope monitor alerts</td>
<td>2.0</td>
<td></td>
<td>Generic Interceptor for SiteScope monitor alerts for use with OMi. This policy requires SiteScope 10.x to be integrated with BAC 6.x already</td>
</tr>
<tr>
<td></td>
<td>bad_log (11.x HP-UX)</td>
<td>9.0</td>
<td></td>
<td>History of HP-UX 11.x bad logs (/var/adm/btmp logfile)</td>
</tr>
<tr>
<td></td>
<td>bad_su</td>
<td>9.0</td>
<td></td>
<td>suppress bad_su if followed by succeeded_su</td>
</tr>
<tr>
<td></td>
<td>Correlation Composer</td>
<td>9.0</td>
<td></td>
<td>HP OpenView Correlation Composer</td>
</tr>
<tr>
<td></td>
<td>cram_ctl</td>
<td>9.0</td>
<td></td>
<td>examples</td>
</tr>
<tr>
<td></td>
<td>Cron (11.x HP-UX)</td>
<td>9.0</td>
<td></td>
<td>HP-UX 11.x cron logfile /var/adm/cron/log</td>
</tr>
<tr>
<td></td>
<td>Cron (RedHat Linux)</td>
<td>9.0</td>
<td></td>
<td>Linux cron logfile /var/log/cron</td>
</tr>
<tr>
<td></td>
<td>dflt_AppEvLog (NT)</td>
<td>9.0</td>
<td></td>
<td>Windows NT/2000 Application Eventlog</td>
</tr>
</tbody>
</table>
Set of key new features and enhancements 1/2

1. Server installation
   - Server installation & configuration decoupled
   - New server package layout, packages are native OS packages

2. Oracle DB improvements
   - Switch to UTF-8
   - On-line config upload (opccfgupld) without server restart
   - Related: Online JGUI configuration synchronization
   - Support of RMAN (remote manager) backup and restore
Set of key new features and enhancements 2/2

1. Java GUI changes
2. New/enhanced APIs/CLIs
3. Improved subagent handling
4. Performance improvements
5. Auditing modifications
6. News in MoM environment
7. User name may contain blanks and other chars
8. Many changed defaults of configuration variables
9. And others
   1. Operator name syntax change
   2. Host identification changes
   3. ...
Technology dependency cleanups

Obsolete with OML compared to OMU 8:

1. Operational / Administrative Motif UI
2. Local integration/co-existence with NNM
   - ovstart/ovstop/ovstatus (use ovc /opcsv wrapper instead)
3. DCE support
4. Service Navigator Value Pack (SNVP)
5. Agent deployment for agent < version 8.53
6. Operator-initiated Message Escalation
7. opcmgrdist
OM9 new features
Policy Versions
# Policy Versions

## Elements in Policy Group "Examples/Windows"

/Policy Bank/Examples/Windows

### Details Windows ➤ Filter ➤

**Found 8 Elements**

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Assigned</th>
<th>Latest</th>
<th>Mode</th>
<th>Smart Plug-in</th>
<th>Categories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>difft AppEvLog (NT)</td>
<td>9.0</td>
<td>9.0</td>
<td>Latest</td>
<td>opcact</td>
<td></td>
<td>Windows NT/2000 Applic.</td>
</tr>
<tr>
<td></td>
<td>difft_cpu util NT</td>
<td>9.0</td>
<td>9.0</td>
<td>Latest</td>
<td>opcact</td>
<td></td>
<td>Windows NT/2000 monitor</td>
</tr>
<tr>
<td></td>
<td>difft_disk util NT</td>
<td>9.0</td>
<td>9.0</td>
<td>Latest</td>
<td>opcact</td>
<td></td>
<td>Win NT Monitor for disk s</td>
</tr>
<tr>
<td></td>
<td>difft_DNSevLog (2000)</td>
<td>9.0</td>
<td>9.0</td>
<td>Latest</td>
<td>opcact</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>difft_FileReplicationEvLog (2000)</td>
<td>9.0</td>
<td>9.0</td>
<td>Latest</td>
<td>opcact</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>difft_SecEvLog (NT)</td>
<td>9.0</td>
<td>9.0</td>
<td>Latest</td>
<td>opcact</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>difft_SysEvLog (NT)</td>
<td>9.0</td>
<td>9.0</td>
<td>Latest</td>
<td>opcact</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Choose an action ➤**

**Found 8 Elements**

---

### Edit Measurement_Threshold Policy "Vivit2009_Basis"

**Properties ➤ Source ➤ Parameters ➤ Message Defaults ➤ Thresholds ➤ Options**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Vivit2009_Basis</td>
</tr>
<tr>
<td>Type</td>
<td>advmonitor</td>
</tr>
<tr>
<td>Version</td>
<td>1.2</td>
</tr>
<tr>
<td>Latest Version</td>
<td>1.2</td>
</tr>
<tr>
<td>Description</td>
<td>Basis Monitoring, AUTO-increment on save</td>
</tr>
</tbody>
</table>

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**September 30, 2009**
Policy Versions

- Multiple versions under same name
- Same functionality as OMW
- Versions of policies only, not of policy groups.
- Possible Problems -
  - Which versions are important?
  - Which versions are deployed, and where?
  - Identification of changes
  - Updating of assignments – how to track changes?
  - Transferring policies across servers – different version numbers
  - Which is the newest version? Is 1.2 really newer than 1.1?
OM9 new features

Policy group handling
New policy group handling

Policy group identified by name and parent group (complete name specified by path)

- Policy groups with same name but different parent group/path are different and treated independently!
Category based instrumentation/deployment
Concept and Configuration

Associate instrumentation files with nodes or policies

- To deploy only related files, not everything

Configuration

- Define category, e.g. “AppXY_Mon”
- Create directory structure in instrumentation area (can be done automatically)
- Put AppXY-related files into that directory
- Assign category to policy
  - for policy related binaries – former actions/monitors
- Assign category to node
  - for non-policy, but application related binaries – former commands
- Deploy policy (or to node)
Using Categories

- Categories can be assigned to policies, nodes or node groups
- Possible Problems?
  - Categories exist in DB and file system – inconsistencies
  - Can not assign to a policy group – where to assign it?
  - Assign to the node group – saved as individual node assignments
  - If a new node is added – does not receive category assignment

- New nodes automatically receive category assignment
- Require consistent usage – otherwise problems will occur
Policy Types
Generic Policy Handling (GPH)
OMU 9.0 supports any kind of policy

- Upload any kind of policy into the OMU database, assign the policy to managed nodes and deploy it
- Detailed policy information are no longer stored as separate fields, but as BLOBs in the OMU 9 database, which allows to handle policies more generically from a database point of view (Take care for your reporting)
- External policy can use an external editor
- Policy alignment with OMW (direct transfer of policies between OMU and OMW)
- Config upload/download integration with 3rd party products
- Improved Subagent Handling based on GPH (subagent policy type)
Provide A Set Of New Policy Types

Alignment item with Operations Manager for Windows

• Supporting all policy types on both management server platforms makes it easier to operate in mixed environments
• Providing the policy types coming from the Windows world enhances significantly the monitoring capabilities of OM for UNIX itself
• SPI integration & migration will be aligned for both management server platforms

New in OMU9:

• ConfigFile
• Node Info
• Service Auto Discovery
• Service Process Monitoring
• Subagent
• Windows Event Log
• Windows Management Interface

• Templates become Policies!
• Applications become Tools!
Node
- The node that hosts the WMI database to be monitored. This can be an agentless node. Without a specified node, HPOM monitors the WMI database of the node that has this policy deployed.
- Use the node selector to browse HPOM nodes or type a node name into the box. See
- Identify the originating node for information about adding agentless nodes to HPOM.

WMI Namespace:
The namespace that contains the data
root\HewlettPackard\OpenView\Data

Object type:
Choose Event or Instance

Event/Instance class name:
Type class that contains the event or instance that you want to monitor.

(No wizards like in OMW)

Connect as Non-Agent User:
- If selected, you will be asked for user name and password, the account must exist on the node and must have local administrator privileges to connect to WMI database.
- If not selected, the agent account is used.
Windows Event Log Policy Type
Alignment item with Operations Manager for Windows

Generic Event log policy type:
• This policy type monitors entries in a text or binary log file and responds when text that you choose appears in the log file.

Windows Event Log policy type
• This policy type monitors entries in a Windows event log and responds when a character pattern that you choose appears in the event log.
• Windows produces several event logs. You can choose which event log you want a policy to monitor.
• If you want to monitor more than one event log, you need more than one policy.
What is Service Auto Discovery?

Alignment item with Operations Manager for Windows

- Provides generic infrastructure for OM Smart Plug-Ins (SPI) for discovering monitored application(s)
- SPIs provide specific discovery policies and instrumentation for the applications they manage
- With the **new auto-discovery policy editor** OM administrators can customize the schedule for a discovery policy
- Customized auto-discovery policies are deployed to a managed node using the standard OM deployment mechanisms
- Distributed discovery agents execute deployed policies and send discovery results back to the discovery server on the management server, Service Tree is populated with the discovered services
Service Process Monitoring Policies
Alignment item with Operations Manager for Windows

Service & OS process monitoring
with specialized measurement threshold policy type and a dedicated policy editor:

- define a wanted state (e.g. service is running)
- create an alert when a change of that state is observed (e.g. “service stopped”)
- in addition option to execute standard actions (e.g. restart a service automatically)
Node Info Policy Type

Alignment item with Operations Manager for Windows

- Node info policy writes values in the nodeinfo file (xml config)
- Provides a way to modify configuration information on a managed node
- This file is created automatically when HP Operations installs an agent on a node.
- Deploying a node info policy to a node will cause the values in the node info policy to be written to the end of the node info file.
- Removing the policy deletes the values.
Policy exchange
OMU 9/OML 9<-> OMW 8.10
Policy exchange OMU 9/OML 9<-> OMW 8.10

Prerequisite for OMU 9/OML 9:
  Updated ovpmutil (OMW_00029)
Exchange policies between OMW 8.10 and OMU 9/OML 9.

Example:
  Policy exchange from OMW 8.10 to OMU 9/OML 9
  • download policies via ovpmutil
  • copy resulting files in same directory structure on OMU 9.0/OML
  • opcpolicy –upload directory=<upload dir>
More details with next OMw version
"Cockpit View"
Information for your reference.
"Cockpit View" based on Java GUI applet

- Quickly assess environment health based on message filters.

URL identifier: cockpitview=true

Two parts:
- Indicator panel
- JGUI (special version)

Status information in the indicator panel is
- based on JGUI global named message filters (configure appropriately)
- represented by colored bars and gauges

JGUI (special version) consists of
- browser pane
- (optional) menu and tool bars
Supported platforms and integrations for OML
OML – supported platforms and integrations
Management server

- Management server platform:
  - OML is supported on
    - Intel and AMD processors on x64 architecture
    - All major binaries, libraries, scripts and other utilities are ported from OMU 9.0 to Linux platform and now run as 64bit applications.
    - RHEL 5.2 and RHEL 5.3
  - Oracle 11.1.0.7
  - RHEL 5 Cluster
  - VMWare
OML – supported platforms and integrations
JGUI and Admin UI

• Java UI runs as application and applet on:
  – HP-UX 11.31 on Itanium, Solaris 10 on SPARC
  – MacOS 10.x
  – JRE 1.6.0.12 or higher

• Admin UI runs in regular web browser. No software installation needed on GUI station. Tested with
  – Internet Explorer 7, 8
  – Mozilla Firefox ≥ 2
OML – supported platforms and integrations

Agents

OML comes with 8.60 agent
Push deployment from OML only supported for 8.60.
Messages being sent from an OA 8.1x and 8.5x are supported.
Check current OMU 8/9 SUMA (support matrix)
info for supported platforms:
http://support.openview.hp.com/selfsolve/document/KM323488

Differences:
• OA 8.6 doesn’t include Tru64 and Linux 2.4 patch packages.
• No support for the platform versions that are vendor obsolete (Solaris 8 for example).
OML – supported platforms and integrations

Supported integrations

- Infra SPI v.1.0 (planned for Oct.)
- OMw 8.10
- OMi 8.10
- Composer 3.3
- PA 5.0
- PM 8.21
- PI 5.41
- Reporter 3.8x
- NNMi 8.12 (Remote)
- NNM 7.53 (Remote, recommended to use NNMi)
- SiteScope Adapter 2.0 (SiS 9.5, 9.51, 10)
- SAM Admin 01.00.080
OML – not planned to be supported at all

- NIS+ not supported as it is no longer available on RHEL (ldap should be used instead).
- Localization will not be part of first release
- ECS Designer - not available for Linux
- Shipment and media kit
- Licenses
OML 9.0 - shipment and media kit

- Version 9.01
- ESD Shipment Release (SR) planned for September 23th 2009.
- Physical Shipment Release (SR) planned for September 30th 2009.
- OML will be shipped without SPI DVD. **
- The existing SPI DVD is not compatible with OML.
- Media Kit:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB248AA</td>
<td>HP Ops/Perf 9.0 Linux Software Media</td>
</tr>
<tr>
<td>TB248-65000</td>
<td>Kit, HP Ops 9.0 Linux *</td>
</tr>
<tr>
<td>J5332-65000</td>
<td>Kit, Reporter 3.8</td>
</tr>
<tr>
<td>B7490-65023</td>
<td>Kit, Performance Manager 8.21 for Linux</td>
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<tr>
<td>B7490-65020</td>
<td>Kit, Performance Agent 5.0</td>
</tr>
<tr>
<td>B7490-65024</td>
<td>Kit, Perf Agent 5.0-All Deployables</td>
</tr>
<tr>
<td>B7490-65334</td>
<td>Kit, Infrastructure SPIs 1.5**</td>
</tr>
</tbody>
</table>

* TB248-65000 contains two OMU 9 DVDs (Server and Admin GUI)

** SR for Infrastructure SPI planned for 10/06/09, so not part of initial OML shipment.
OML 9.0 - licenses

- TB245AA HP Ops Mgr Linux, PM, Reporter
  - HP Operations Manager on Linux Management Server software LTU for a single computer.
  - OM server on RHEL/AMD or Intel x86-64
  - Performance Manager (RHEL)
  - Reporter (Windows)

- Corresponding product number:
  - TB246AA (HP Operations Manager on Linux Non-Production Failover software LTU for a single computer)
  - TB247AA (HP Operations Manager on Linux Non-Production Development/Test software LTU for a single computer)
  - All product numbers also available as TBxxxAAE for E-media

- Unlike OMU 9.0 on HP-UX no OML bundles are offered along with NNMi and NNMi/PM
License exchange

<table>
<thead>
<tr>
<th>License Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB166ZA/BB166ZAE</td>
<td>HP Ops Mgr Windows, PM, Reporter</td>
</tr>
<tr>
<td>TA444AA/TA444AAE</td>
<td>HP Ops Mgr HP-UX, PM, Reporter</td>
</tr>
<tr>
<td>TB245AA/TB245AAE</td>
<td>HP Ops Mgr Linux, PM, Reporter</td>
</tr>
<tr>
<td>Planned: TBD</td>
<td>HP Ops Mgr Solaris, PM, Reporter</td>
</tr>
</tbody>
</table>

The following products have equivalent functionality and same price. Licenses can be exchanged via regional ZDO (Zero Dollar Order), appropriate media kits ordered and support contract updated.

Hint: The process for OMU 8.x to OMU/L 9.x or OMW 8.10 is currently being worked out.
Migrating to OM 9
Migration – What's changed

- Policy storage in DB
- Policies – multiple bodies
- Policy download files
- Policy Group Structure
- Valid Policy Group Names
- Categories
- Instrumentation Files
- Auditing data
- DCE agents
- Discontinued Agent types

- Console policy type
- Monitor policies
- NNM based objects
- IP Pattern Other as node type
- User types
- Message escalation
- Commands
- etc.
Training requirements

Minor changes only in the Java GUI

- No Operator training requirements

Completely new Admin GUI

- MIDAS Editor – start using the new GUI on OMU 8
- New features – locate, compare, catalogs, etc.
- Free Introduction Webinars are available at blue-elephant-systems.com
OMU ecosystem

Changes require redesign for scripts

- New policy types stored as blobs in database
- Downloaded policies include extra information
- New policy group structure – identification
- Policy Versions – assignments, etc.

SPI's

- Currently SPI's are not available for OMU 9
- New release coming soon – utilizes new features
Migration

Steps
OMU 9 Installation
OMU Configuration Transfer
Message Forwarding
Agent Forwarding
Test Agents
Test Java GUI
Test Ecosystem
Manage Both systems in parallel via MIDAS
Migration tips

Some configuration is changed during upload

• Cfg transfer works, but … some changes made – which?
• Use the MIDAS Migration report to see details
• Directly usable from OMU 8

Uploading policies from OMU 8

• Generates 1.0 version
• Creates fixed assignments
• Modification of policy generates 1.1 version
• Must update assignments to deploy to agent
• A newer version may exist on the server,
• Example: OS monitoring policies

Policy Groups stored as hierarchy

• Uploads from OMU 8 generate multiple policy groups
Migration Report

OMU 9 Migration Report for Management Server korsika_server

This report uses the existing data on the OMU 8 management server to list problems that could occur when upgrading to OMU 9. This report might not be complete or might even show things that will work out ok, because there might be newer versions of OMU 9 that will handle things differently. This report is just intended as a first starting point for a migration project.

Summary

Problems by Objects

<table>
<thead>
<tr>
<th>Object</th>
<th>Critical</th>
<th>Warning</th>
<th>Informational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodes</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Policy Groups</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Policies</td>
<td>1</td>
<td>0</td>
<td>134</td>
</tr>
<tr>
<td>Applications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reports</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Instrumentation Files</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>4</td>
<td>139</td>
</tr>
</tbody>
</table>

Nodes

Unsupported Machine Types

The following list displays all nodes in the OMU 8 node bank that are running versions of an operating system or CM agent that are not supported by OMU 9.

Solution:
Upgrade the node OS or CM agent to a version supported by OMU 9 or remove the node from the OMU 8 node bank before starting the migration.

<table>
<thead>
<tr>
<th>Node</th>
<th>Current Machine Type</th>
<th>Possible new machine type</th>
</tr>
</thead>
<tbody>
<tr>
<td>bornholm.bes-intern.com</td>
<td>ms/intel/int</td>
<td>nx86w/intnt</td>
</tr>
<tr>
<td>kobble.bes-intern.com</td>
<td>linux/intel/linux:24</td>
<td>-</td>
</tr>
<tr>
<td>shuttle-xpc.bes-intern.com</td>
<td>ms/intel/int</td>
<td>nx86w/intnt</td>
</tr>
</tbody>
</table>