# Document Revision History

<table>
<thead>
<tr>
<th>Document Version</th>
<th>Date</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>12/15/2011</td>
<td>Initial version for UMP 2.6. (No changes from UMP 2.5.2 document, version 1.4.)</td>
</tr>
<tr>
<td>1.1</td>
<td>3/19/2012</td>
<td>Minor edits</td>
</tr>
</tbody>
</table>
Legal Notices

Copyright © 2012, Nimsoft. All rights reserved.

Warranty

The material contained in this document is provided "as is," and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by applicable law, Nimsoft Corporation disclaims all warranties, either express or implied, with regard to this manual and any information contained herein, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Nimsoft Corporation shall not be liable for errors or for incidental or consequential damages in connection with the furnishing, use, or performance of this document or of any information contained herein. Should Nimsoft Corporation and the user have a separate written agreement with warranty terms covering the material in this document that conflict with these terms, the warranty terms in the separate agreement shall control.

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Nimsoft Corporation as governed by United States and international copyright laws.

Restricted Rights Legend

If software is for use in the performance of a U.S. Government prime contract or subcontract, Software is delivered and licensed as "Commercial computer software" as defined in DFAR 252.227-7014 (June 1995), or as a "commercial item" as defined in FAR 2.101(a) or as "Restricted computer software" as defined in FAR 52.227-19 (June 1987) or any equivalent agency regulation or contract clause. Use, duplication or disclosure of Software is subject to Nimsoft Corporation’s standard commercial license terms, and non-DOD Departments and Agencies of the U.S. Government will receive no greater than Restricted Rights as defined in FAR 52.227-19(c)(1-2) (June 1987). U.S. Government users will receive no greater than Limited Rights as defined in FAR 52.227-14 (June 1987) or DFAR 252.227-7015 (b)(2) (November 1995), as applicable in any technical data.

Trademarks

Adobe®, Acrobat®, Acrobat Reader®, and Acrobat Exchange® are registered trademarks of Adobe Systems Incorporated.

Intel® and Pentium® are U.S. registered trademarks of Intel Corporation.

Java(TM) is a U.S. trademark of Sun Microsystems, Inc.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

Netscape(TM) is a U.S. trademark of Netscape Communications Corporation.

Oracle® is a U.S. registered trademark of Oracle Corporation, Redwood City, California.

UNIX® is a registered trademark of the Open Group.
Contact Nimsoft

For your convenience, Nimsoft provides a single site where you can access information about Nimsoft products.

At http://support.nimsoft.com/, you can access the following:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- Nimsoft Support policies and guidelines
- Other helpful resources appropriate for your product

Provide Feedback

If you have comments or questions about Nimsoft product documentation, you can send a message to support@nimsoft.com.
# Contents

## Chapter 1: Configuring Multiple UMP Servers

- Introduction ........................................................................................................................................... 7
- SDP Not Supported with Multiple UMP Servers .................................................................................. 7

## Chapter 2: Configuring the Load Balancer ......................................................................................... 9

## Chapter 3: Configuring Multiple UMP Servers .................................................................................. 11

- Configuring the Primary UMP Server ................................................................................................. 11
- Configuring a Secondary UMP Server ................................................................................................. 12
- Configuring Portal Clustering ............................................................................................................ 16
- Testing the Installation ......................................................................................................................... 16
Chapter 1: Configuring Multiple UMP Servers

This section describes how to configure multiple Unified Management Portal (UMP) servers to run behind a load balancer and use the same Nimsoft NIS database.

This section contains the following topics:

Introduction (see page 7)
SDP Not Supported with Multiple UMP Servers (see page 7)

Introduction

The UMP installer supports installing one UMP server under a hub. However, you may want to run multiple UMP servers under a hub. For example, you may want to configure two UMP servers to run behind a load balancer for increased scalability and capacity. This guide explains how to configure multiple UMP servers under a hub. The UMP servers use the same NIS database.

SDP Not Supported with Multiple UMP Servers

The process described in this guide is supported only if Service Delivery Portal (SDP) is not installed in your environment. If SDP is installed, you must uninstall it before running multiple UMP servers under a hub.

For instructions on uninstalling SDP, see the Service Delivery Portal Installation Guide.
Chapter 2: Configuring the Load Balancer

This section tells you the high-level steps to configure your load balancer to run with UMP.

Load balancers vary. Refer to your load balancer documentation for configuration details.

1. Configure the load balancer with virtual IP addresses for the two UMP servers.
2. Configure the load balancer to use sticky sessions.
   Sticky sessions is a feature of many commercial load balancing solutions that allows web farms to route requests for a particular session to the same machine that serviced the first request for that session. This ensures that a session is not disrupted as a result of requests related to that session being routed to different servers.
3. Configure your load balancer to use a load balancing algorithm.
   A load balancing algorithm tells the load balancer how to distribute incoming requests. The most common load balancing algorithm is the round robin, where one connection is sent to each server on the list in turn.
Chapter 3: Configuring Multiple UMP Servers

As an example, this guide assumes that you have a Nimsoft robot named primary running under a hub named /Domain/Hub. The robot primary is a hub robot running data_engine, nas, etc. You configure it to run a UMP server by executing a standard UMP installation on /Domain/Hub/primary.

The steps in the following sections describe how to configure an additional UMP server on a robot named secondary running under the hub /Domain/Hub.

This section contains the following topics:

- Configuring the Primary UMP Server (see page 11)
- Configuring a Secondary UMP Server (see page 12)
- Configuring Portal Clustering (see page 16)
- Testing the Installation (see page 16)

Configuring the Primary UMP Server

Use the UMP installer to install a UMP server to the hub robot /Domain/Hub/primary.

A UMP server consists of these packages:

- jre
- dap
- dashboard_engine
- wasp
- ump
- ump portlets

You must define the keys enable_multi_instance and multi_instance_check_interval for each dashboard_engine using the same NIS database.

After installing UMP, use the Raw Configure dialog to modify the dashboard engine’s configuration. Within the data section, change the Value field of the enable_multi_instance key to 1.

The multi_instance_check_interval key is located in the updateintervals section in the Raw Configure dialog.
Configuring a Secondary UMP Server

Note: The operating system platform of the primary and secondary UMP servers has to be the same; however, the operating system version does not have to be the same. For example, you can use Windows 2008 and Windows 2003 for the primary and secondary UMP servers.

1. Distribute the UMP server packages:
   - jre
   - dap
   - dashboard_engine
   - wasp
   - ump
   - ump portlets

2. Configure dap. Use either the configuration UI, as shown below, or Raw Configure to change the dap Data Engine setting to /Domain/Hub/primary/data_engine.

![Dap Configuration UI](image)
3. Configure dashboard_engine. Use either the configuration UI, as shown below, or Raw Configure to change the following addresses:
   - Alarm Server
   - Data Access Probe
   - Data Engine
   - Variable Server

![Dashboard Engine Configuration UI]

4. Use Raw Configure to modify the additional dashboard_engine configuration items:
   - In the `data` section add the key `enable_multi_instance` and set its value to `1`.
   - In the `update_intervals` section add the key `multi_instance_check_interval` and set its value to `30`.
5. Configure wasp. Use the configuration UI to set the following variables in the Setup tab under the **Probe Addresses** heading:

- `data_engine`
- `dashboard_engine`
6. Open the wasp.cfg file and add the following lines:

   **Note:** The wasp.cfg file is usually in the Program Files\Nimsoft\probes\service\wasp directory.

   ```
   <ump_common>
     dap = /Domain/Hub/secondary/dap
     nas = /Domain/Hub/primary/nas
     sla_engine = /Domain/Hub/primary/sla_engine
     ace = /Domain/Hub/primary/ace
     nis_server = /Domain/Hub/primary/nis_server
   </ump_common>
   ```

7. Configure the UMP portlets. Several web applications (webapps) and portlets have variables that you must change. Using the WASP configuration UI on the Webapps tab, double-click the webapp or portlet. Navigate to the Custom tab and change the value for each of the following portlet/key combinations:

   **Variable Values for UMP Portlets**

<table>
<thead>
<tr>
<th>Portlet</th>
<th>Key</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlarmConsole</td>
<td>nas</td>
<td>/Domain/Hub/primary/nas</td>
</tr>
<tr>
<td>CustomDashboards</td>
<td>nas</td>
<td>/Domain/Hub/primary/nas</td>
</tr>
<tr>
<td>DiscoveryStatus</td>
<td>ace</td>
<td>/Domain/Hub/primary/ace</td>
</tr>
<tr>
<td>Reports</td>
<td>report_engine</td>
<td>/Domain/Hub/primary/report_engine</td>
</tr>
<tr>
<td>DynamicViews</td>
<td>nas</td>
<td>/Domain/Hub/primary/nas</td>
</tr>
<tr>
<td></td>
<td>report_engine</td>
<td>/Domain/Hub/primary/report_engine</td>
</tr>
<tr>
<td>DashboardDesigner</td>
<td>dap</td>
<td>/Domain/Hub/secondary/dap</td>
</tr>
<tr>
<td></td>
<td>variable_server</td>
<td>/Domain/Hub/primary/variable_server</td>
</tr>
</tbody>
</table>

8. Enable synchronization of media files.

   **Note:** You must use UmpMedia 1.5.0.1 or later.

   Configure all participating UMP servers to synchronize the local set of media files with the central repository in the NIS database. This is done by using Raw Configure to add the following keys to each wasp probe:

   - `enable_multi_instance` - Set to 1 to enable synchronization
   - `media_update_interval` - Set to the desired number of seconds between updates

Configuring Portal Clustering

1. Deactivate the wasp probe on both UMP servers.

2. On both UMP servers add or uncomment the following three lines in `<Nimsoft Install>/probes/service/wasp/webapps/ROOT/WEB-INF/classes/portal-ext.properties:

   net.sf.ehcache.configurationResourceName=/ehcache/hibernate-clustered.xml
   ehcache.multi.vm.config.location=/ehcache/liferay-multi-vm-clustered.xml
   comm.link.properties=UDP(bind_addr=127.0.0.1;mcast_addr=231.12.21.102;mcast_port=45566;ip_ttl=32;mcast_send_buf_size=150000;mcast_recv_buf_size=80000);PING(timeout=2000;num_initial_members=3):MERGE2(min_interval=5000;max_interval=10000);FD.SOCK:VERIFY_SUSPECT(timeout=1500):pbcast.NAKACK(gc_lag=50;retransmit_timeout=300,600,1200,2400,4800;max_xmit_size=8192);UNICAST(timeout=300,600,1200,2400,4800):pbcast.STABLE(desired_avg_gossip=20000):FRAG(frag_size=8096;down_thread=false;up_thread=false):pbcast.GMS(join_timeout=5000;join_retry_timeout=2000;shun=false;print_local_addr=true)

3. On the primary UMP server share the directory `<Nimsoft Install>/probes/service/data.

4. On the secondary UMP server replace the directory `<Nimsoft Install>/probes/service/data with a link to the primary data share. Use the mklink command with the /D option for Windows.

5. In the Windows services manager on the secondary UMP server, change the Log On for the Nimsoft Robot Watcher service. The user on the secondary UMP server needs to have system privileges to write to the data directory on the primary UMP server. Restart the Nimsoft Robot Watcher service.

6. Activate wasp on the primary UMP server.

7. Once wasp is running on the primary UMP server, activate wasp on the secondary UMP server.

Testing the Installation

You should now have two UMP servers running under a single hub and using the same NIS database. You can access these servers using either of these URLs:

- http://primary
- http://secondary:8084