MediaBeacon 21.03

Complete Installation Guide

10 - 2021

ESKO

Contents

1. Welcome to MediaBeacon's Installation Guide **4**
1.1. Copyright Notice 4
1.2. MediaBeacon Installation Guides 6
1.2.1. Installing MediaBeacon for Windows 6
1.2.2. Running MediaBeacon as a Windows Service 19
1.3. MediaBeacon System Requirements 27
Hardware 27
Software 27

2. Webhead_Manual_MediaBeacon_R3volution_8.6 ..... **29**
2.1. Copyright Notice 29
2.2. Introduction 30
2.3. Webhead Installation: Windows 31
2.4. Port Information 37

3. Remote MediaBeacon Preview Nodes **38**
3.1. Introduction 38
3.2. Description 38
3.3. Initial configuration 38
3.3.1. Database Requirements 39
3.3.2. Database Ports 39
3.3.3. MediaBeacon Ports 39
3.4. Preview Node Configuration 40
3.4.1. External Application 40
3.4.2. Start Converter Service 41
3.4.3. Movie Profiles 41
3.4.4. Launch Settings 42
3.5. Connecting Preview to MediaBeacon 42
3.5.1. Mount 'Shared Files Directory' 42
3.5.2. Whitelist Remote IP 42
3.5.3. Attach MediaBeacon Server 43
3.5.4. Starting Preview 44
3.6. Logging 44
3.7. Port Information 45
3.8. Running as a Windows Service 45

4. MediaBeacon R3volution R3search Cluster Manual 8.6 ..... **47**
4.1. Copyright Notice 47
4.2. Introduction 48
4.3. When is Clustering Appropriate? 49

4.4. R3Search Cluster Components....49
4.5. Shard Configuration and Performance....50
4.6. R3Search Clustering in Practice....51
4.6.1. Installation....51
4.6.2. R3Search Administration: Troubleshooting....58
4.7. Port Information....62
4.8. Appendix....63
4.9. Running Standalone R3Search as a Service....63

1. Welcome to MediaBeacon's Installation Guide

Welcome to MediaBeacon's guide for installing our product. This guide reviews installation and server-level configuration options of our product.

Using this Guide

- To navigate through this guide, use the # icons to expand the Table of Contents panel, and click the topic name to read that entry.
- To search across all topic for a text string, use the search field in the upper left corner.
- To download a PDF version of the complete guide, click the "PDF Version" link in the upper right corner of the page.
- To return to the list of all MediaBeacon documentation, click "Other MediaBeacon documentation" in the upper right corner of the page.

1.1. Copyright Notice

© Copyright 2021 Esko Software BV, Gent, Belgium

All rights reserved. This material, information and instructions for use contained herein are the property of Esko Software BV. The material, information and instructions are provided on an AS IS basis without warranty of any kind. There are no warranties granted or extended by this document. Furthermore Esko Software BV does not warrant, guarantee or make any representations regarding the use, or the results of the use of the software or the information contained herein. Esko Software BV shall not be liable for any direct, indirect, consequential or incidental damages arising out of the use or inability to use the software or the information contained herein.

The information contained herein is subject to change without notice. Revisions may be issued from time to time to advise of such changes and/or additions.

No part of this document may be reproduced, stored in a data base or retrieval system, or published, in any form or in any way, electronically, mechanically, by print, photoprint, microfilm or any other means without prior written permission from Esko Software BV.

This document supersedes all previous dated versions.

PANTONE® Colors displayed in the software application or in the user documentation may not match PANTONE-identified standards. Consult current PANTONE Color Publications for accurate color. PANTONE® and other Pantone trademarks are the property of Pantone LLC. © Pantone LLC, 2015

Pantone is the copyright owner of color data and/or software which are licensed to Esko to distribute for use only in combination with Studio Visualizer. PANTONE Color Data and/or Software shall not be copied onto another disk or into memory unless as part of the execution of Studio Visualizer.

This software is based in part on the work of the Independent JPEG Group.

Portions of this software are copyright © 1996-2002 The FreeType Project (www.freetype.org). All rights reserved.

Portions of this software are copyright 2006 Feeling Software, copyright 2005-2006 Autodesk Media Entertainment.

Portions of this software are copyright ©1998-2003 Daniel Veillard. All rights reserved.

Portions of this software are copyright ©1999-2006 The Botan Project. All rights reserved.

Part of the software embedded in this product is gSOAP software. Portions created by gSOAP are Copyright ©2001-2004 Robert A. van Engelen, Genivia inc. All rights reserved.

Portions of this software are copyright ©1998-2008 The OpenSSL Project and ©1995-1998 Eric Young (eay@cryptsoft.com). All rights reserved.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/).

Adobe, the Adobe logo, Acrobat, the Acrobat logo, Adobe Creative Suite, Illustrator, InDesign, PDF, Photoshop, PostScript, XMP and the Powered by XMP logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Microsoft and the Microsoft logo are registered trademarks of Microsoft Corporation in the United States and other countries.

SolidWorks is a registered trademark of SolidWorks Corporation.

Portions of this software are owned by Spatial Corp. 1986 2003. All Rights Reserved.

JDF and the JDF logo are trademarks of the CIP4 Organisation. Copyright 2001 The International Cooperation for the Integration of Processes in Prepress, Press and Postpress (CIP4). All rights reserved.

The Esko software contains the RSA Data Security, Inc. MD5 Message-Digest Algorithm.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems in the U.S. and other countries.

Part of this software uses technology by Best Color Technology (EFI). EFI and Bestcolor are registered trademarks of Electronics For Imaging GmbH in the U.S. Patent and Trademark Office.

Contains PowerNest library Copyrighted and Licensed by Alma, 2005 – 2007.

Part of this software uses technology by GlobalVision. ArtProof and ScanProof are registered trademarks of GlobalVision Inc.

Part of this software uses technology by Qoppa Software. Copyright © 2002-Present. All Rights Reserved.

All other product names are trademarks or registered trademarks of their respective owners.

Correspondence regarding this publication should be forwarded to:

Esko Software BV

Kortrijksesteenweg 1095

B – 9051 Gent

info.eur@esko.com

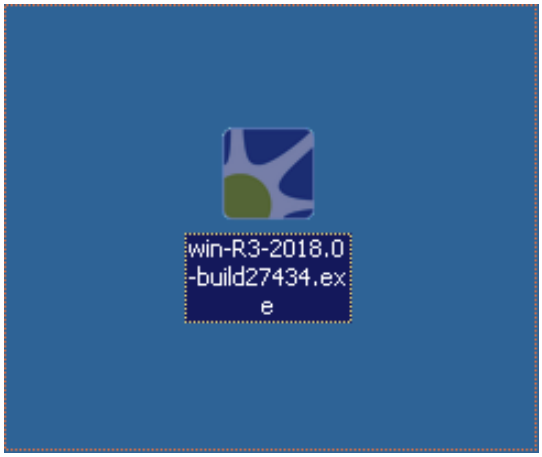
1.2. MediaBeacon Installation Guides

MediaBeacon Installation References

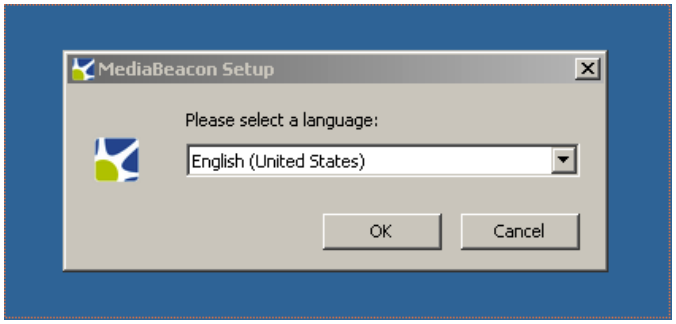
1.2.1. Installing MediaBeacon for Windows

Installing MediaBeacon on Windows

1. Double-click the installer application. This will be typically be located in the Downloads folder for the Windows user.

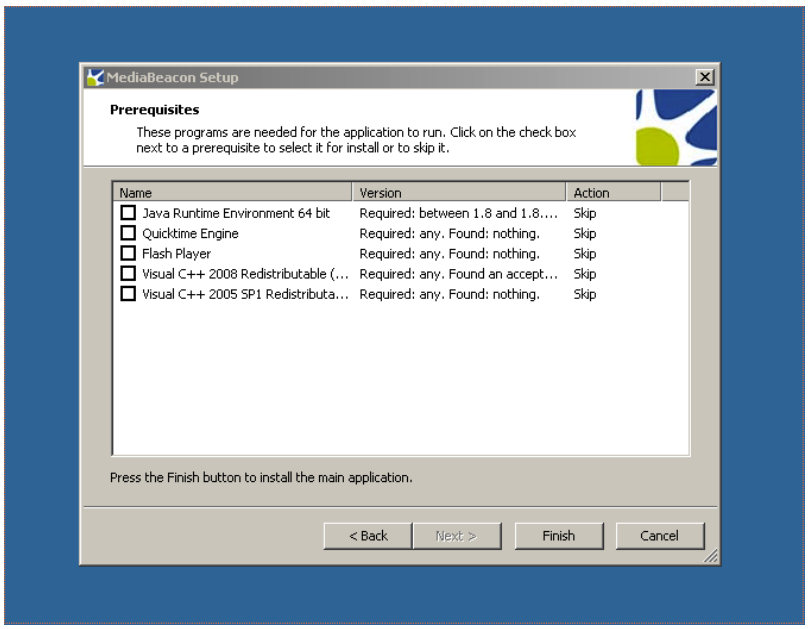


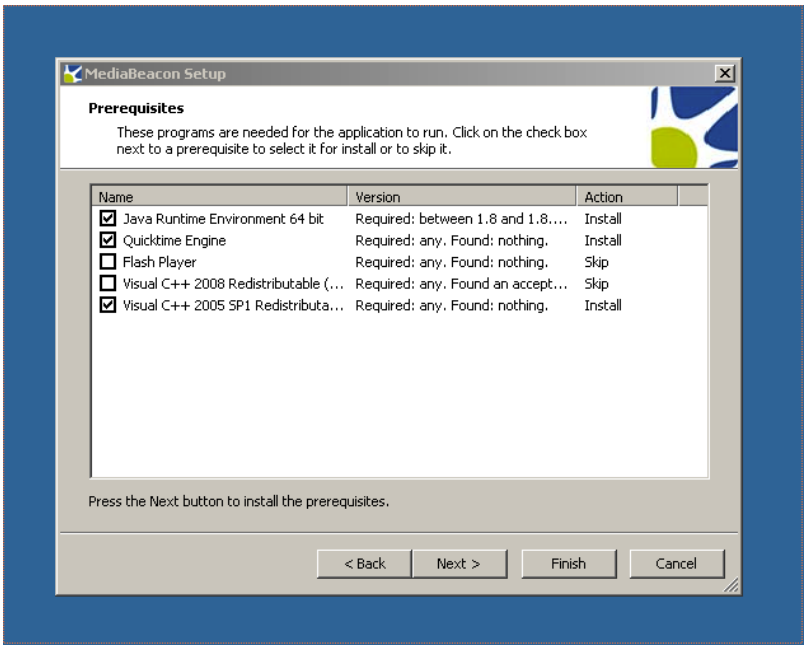
2. Select the language that you would like to use for the MediaBeacon Quick Install process and click "OK".



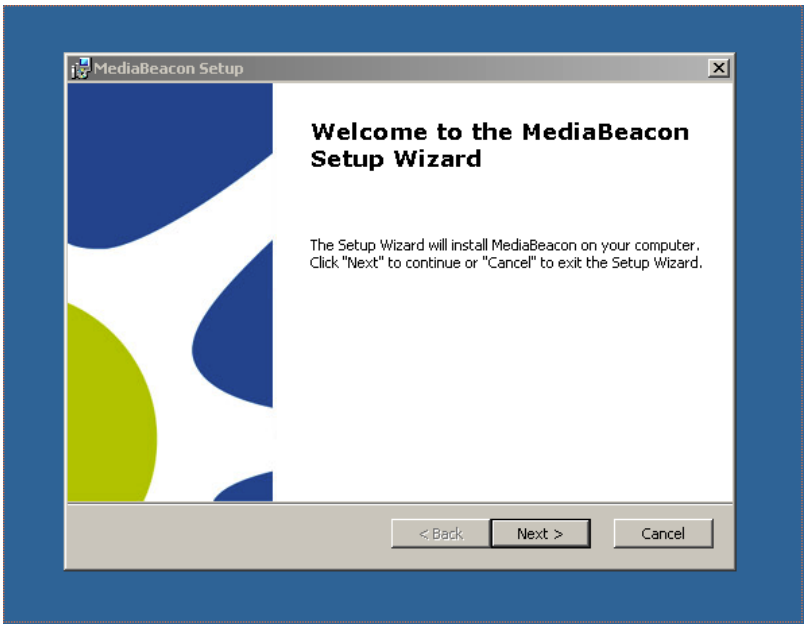
3. MediaBeacon Setup will first check that you have the prerequisite programs installed on your computer. The most common prerequisite programs are the Java Runtime Environment, Ghostscript, and QuickTime. The resulting dialog box will let you know if there are missing prerequisites.

4. Click the "Next >" button to view a list of the missing prerequisites in the Prerequisites Wizard.
5. If there are no missing prerequisites, the Prerequisites Wizard will still appear, but the action for the prerequisite will display as Skip since it is already installed. If there are missing prerequisites, click the checkbox to the left of the prerequisite installation name and click "Next >" to install the selected application, or open the website for installation instructions if Flash is the selected application. Leave the checkbox blank to skip the installation of that prerequisite.***Note: For the quick install to be successful, 'Quicktime Engine' and 'Flash Player' are the only prerequisites that can be skipped (unchecked) without being installed, but they should only be skipped if you have a specific reason. If the prerequisite is already present, it will automatically be set to the 'Skip' action and the 'Version' column will indicate that an acceptable version is already in place.***

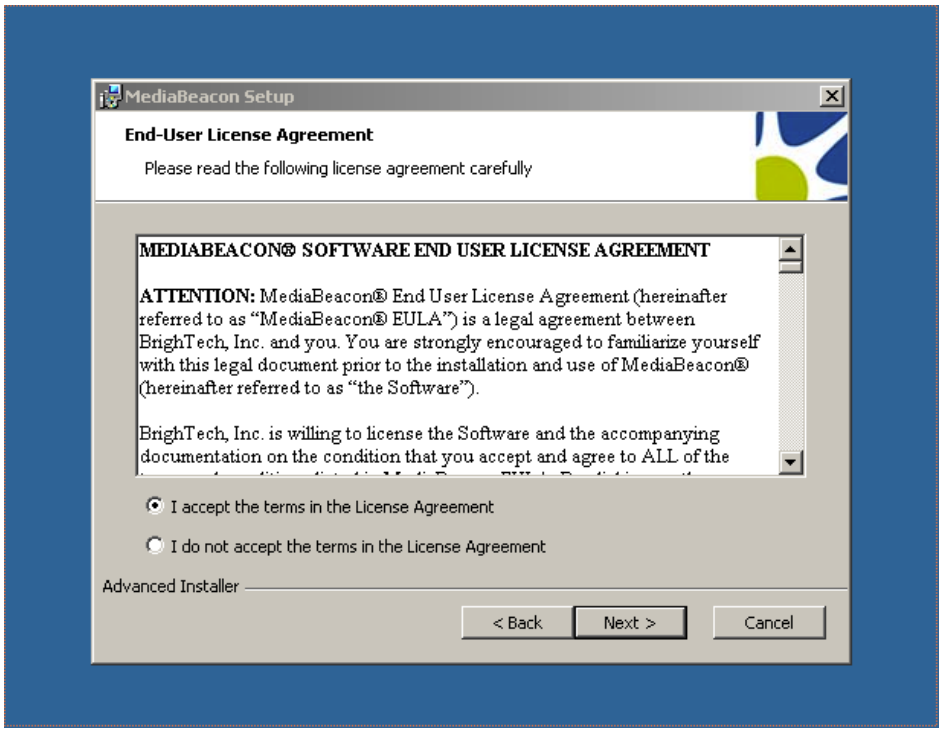




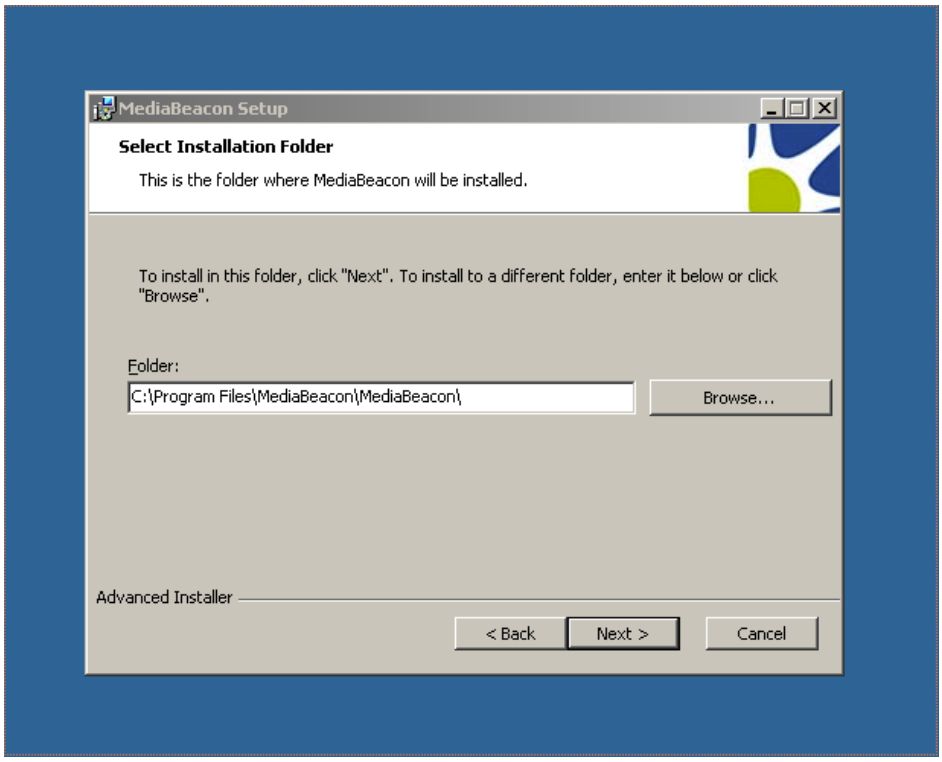
6. After installing the selected prerequisites, click "Finish".
7. The next dialog is the "MediaBeacon Setup Wizard." Click "Next >" to continue.



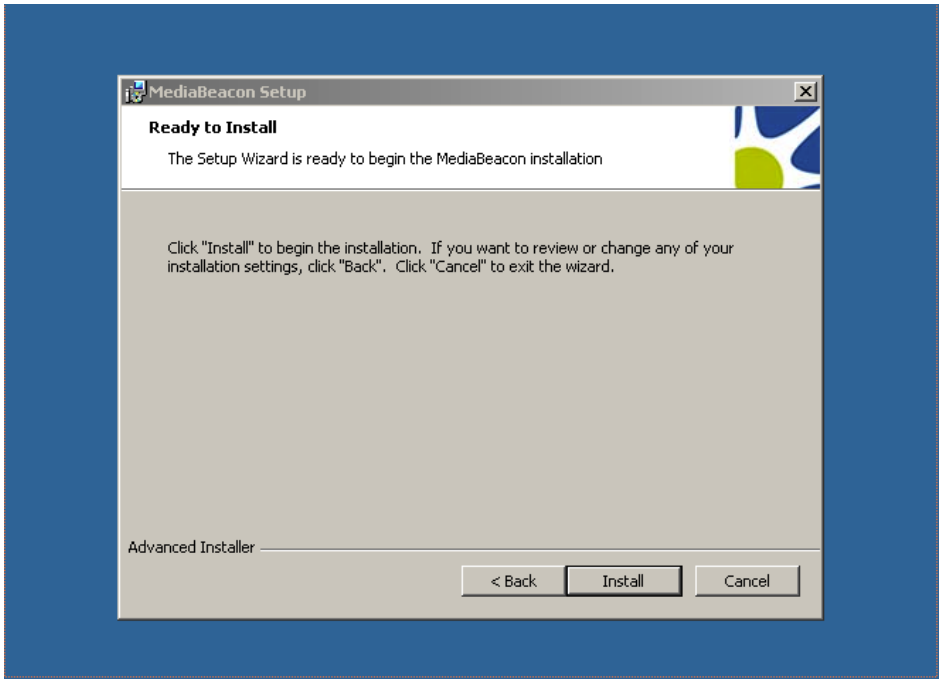
8. Read through the license agreement and accept the terms by clicking "I accept the terms in the License Agreement". Click "Next >" to continue with the installation.



9. Next, you will need to select the Installation Folder that MediaBeacon will be installed into. By default, a folder named "MediaBeacon" will be created in your Program Files directory on your Windows system volume information folder. You can choose to use the created MediaBeacon folder or choose a different folder by clicking on the "Browse" button. Once you've selected the folder that MediaBeacon will be installed to, click "Next>".

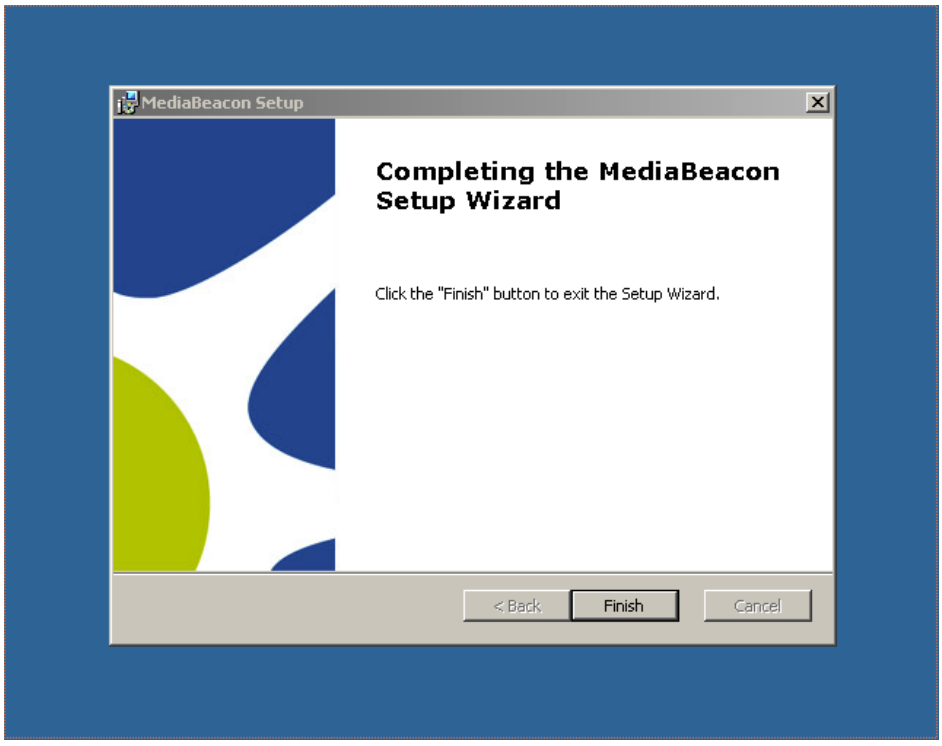


10. Click "Install" to install MediaBeacon.



Note: If an "Installer Information" error occurs at this point, informing the user of "a problem with this Windows Installer package".

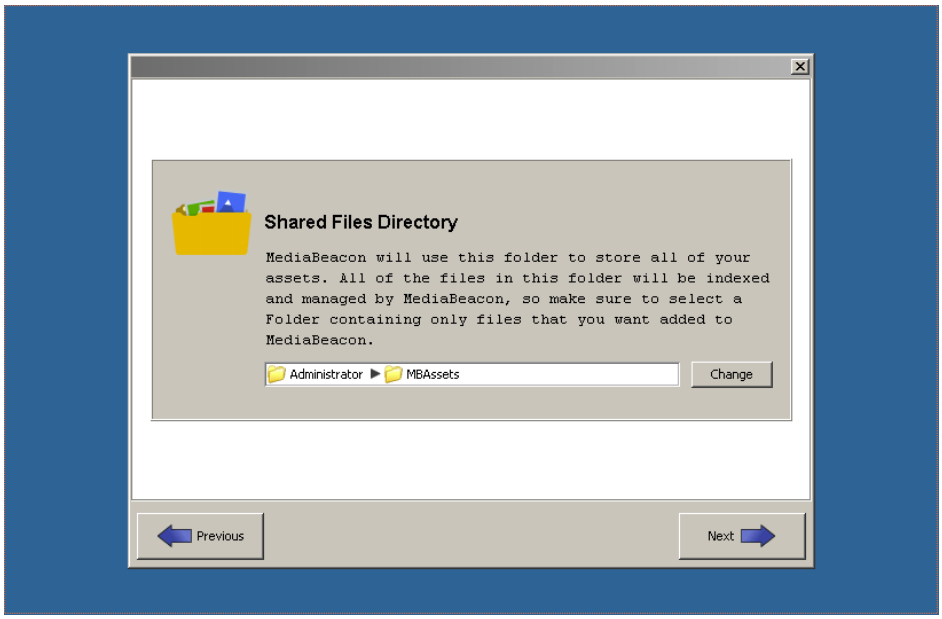
11. Click "Finish" to exit the MediaBeacon Setup Wizard.



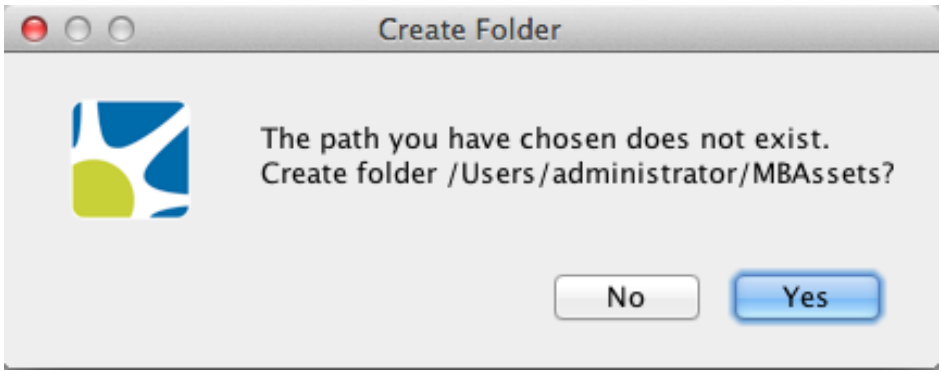
12. Next, double-click the desktop shortcut or navigate from the Start Menu to start the application.

13. MediaBeacon will display several additional screens on the first run after installation. First, you will need to read through the license agreement, click "I agree to above license", and click "Next" to continue.

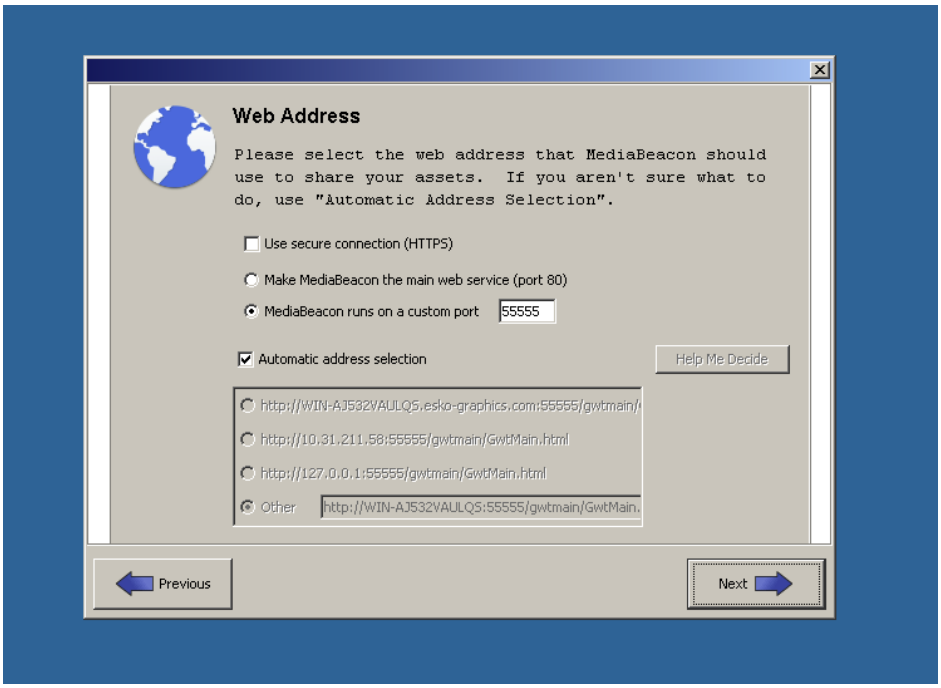
14. Next, select the "Shared Files Directory" that will store all of your assets. By default, a folder called "MBAssets" will be created in your Home directory. If you want to choose a different folder, click the "Change" button. When you have selected the desired folder to be the Shared Files Directory, click "Next" to continue.



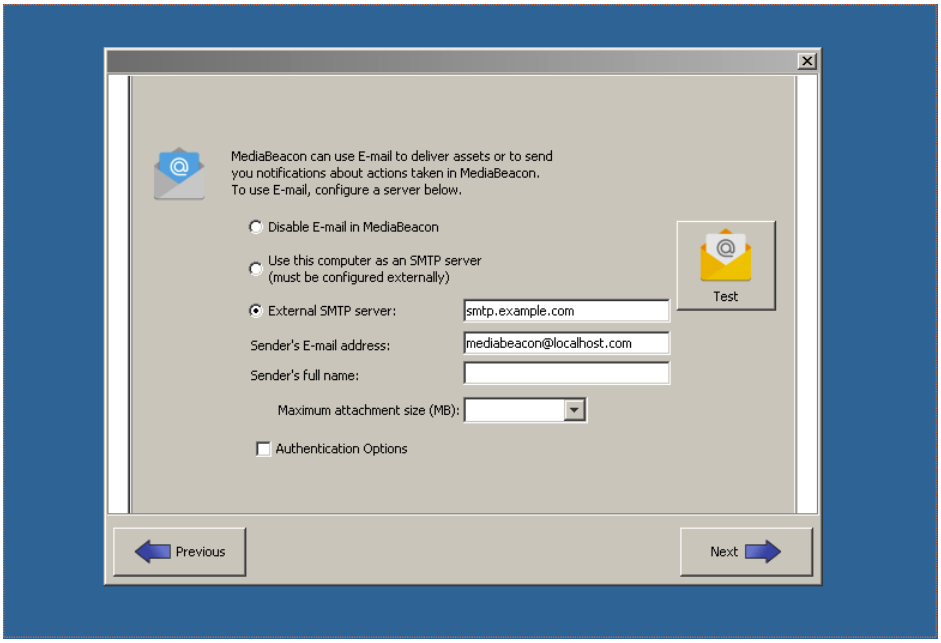
15. If the "MBAssets" folder does not already exist, MediaBeacon will ask permission to create it. Click "Yes" to create the folder.



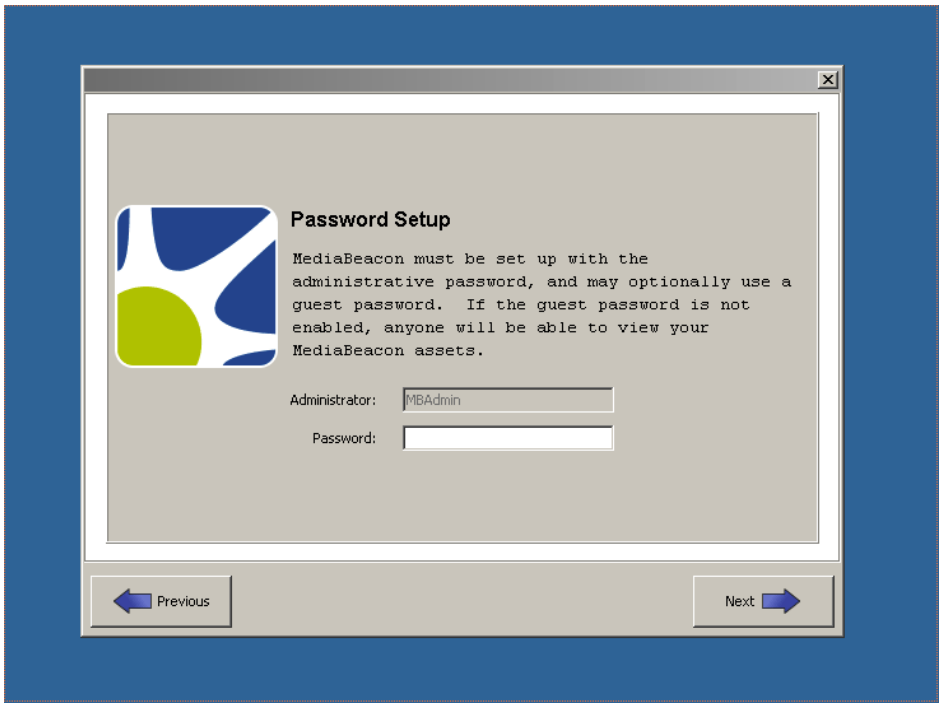
16. Next, the "Web Address" configuration dialog box will appear. Click "Next" to accept the defaults and use the "Automatic address selection".



17. MediaBeacon allows you to use email notifications for various actions. The next screen allows you to set up email preferences. In the "External SMTP server" field, add the address of your SMTP server. In the "Sender's E-mail address" field, add the email address to use as the sender. In the "Sender's full name" field, add the name for the sender. Select a maximum attachment size (MB) from the drop down list that will prevent MediaBeacon from sending an email if it goes over the size limit. After selecting your preferences, click "Next".

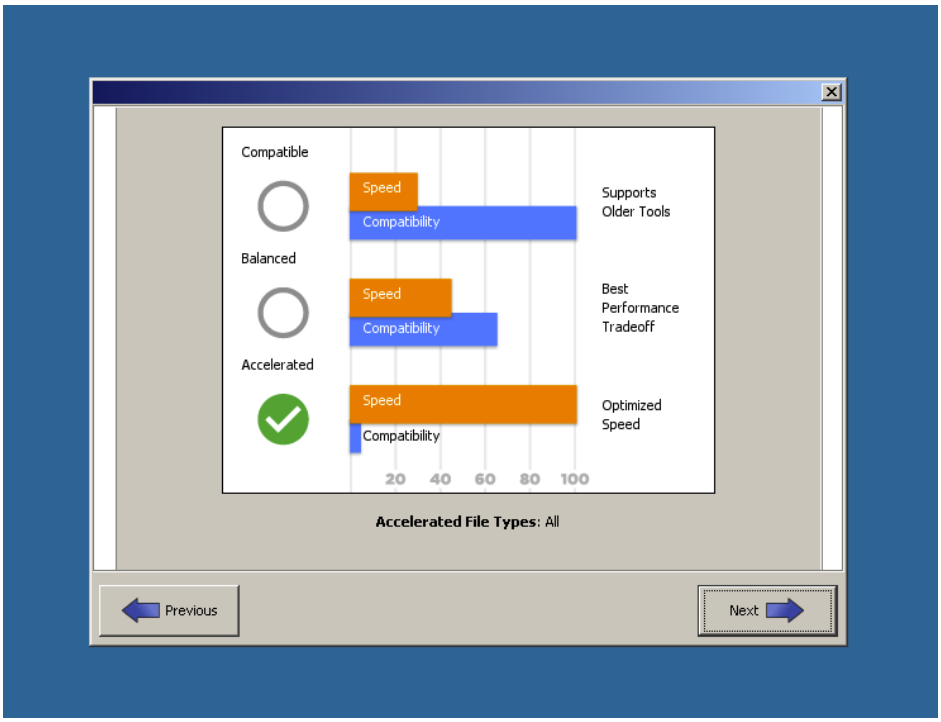


18. Next, the "Password Setup" dialog box will appear. Here you must specify the MBAdmin, or root, password. This password is used to login to MediaBeacon to perform administrative tasks. Click "Next" after you add your password.



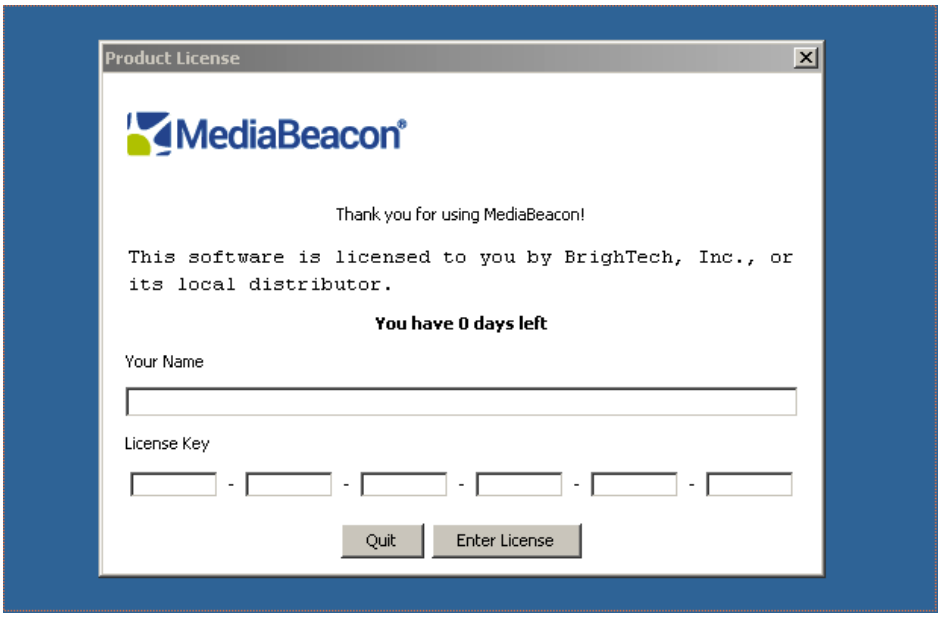
19. Next, you will need to select the proper XMP Acceleration mode for your environment. You should select "Accelerated" unless you have been told otherwise by your MediaBeacon representative.

    Note: In order to manage a large number of files, MediaBeacon has developed a unique method of accelerating the write of the metadata for each file into the file system. This acceleration works outside of the standard XMP specification, but is crucial for reasonable response times on larger databases. This setting only affects the way the files are stored on the server. Files are always downloaded in a completely compatible format.



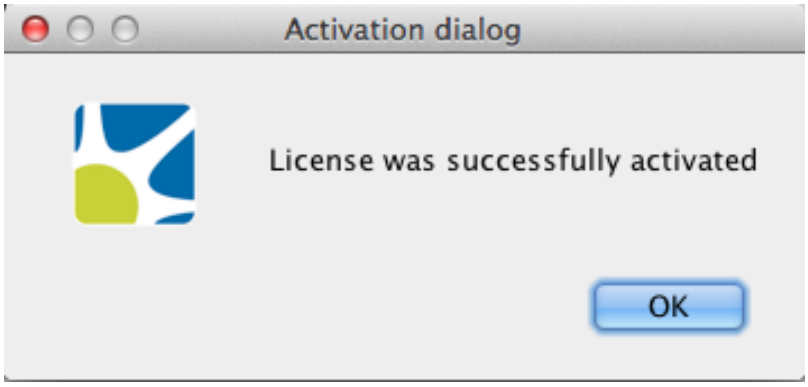
20. Click "Next" to finish the installation and launch MediaBeacon.

21. The first time you launch the software, you will be required to enter a valid license. Your MediaBeacon representative should provide you with the license and should be contacted if you have any issues activating the software. Enter the license information and click "Enter License".***Note: The name of the licensor is case-sensitive***

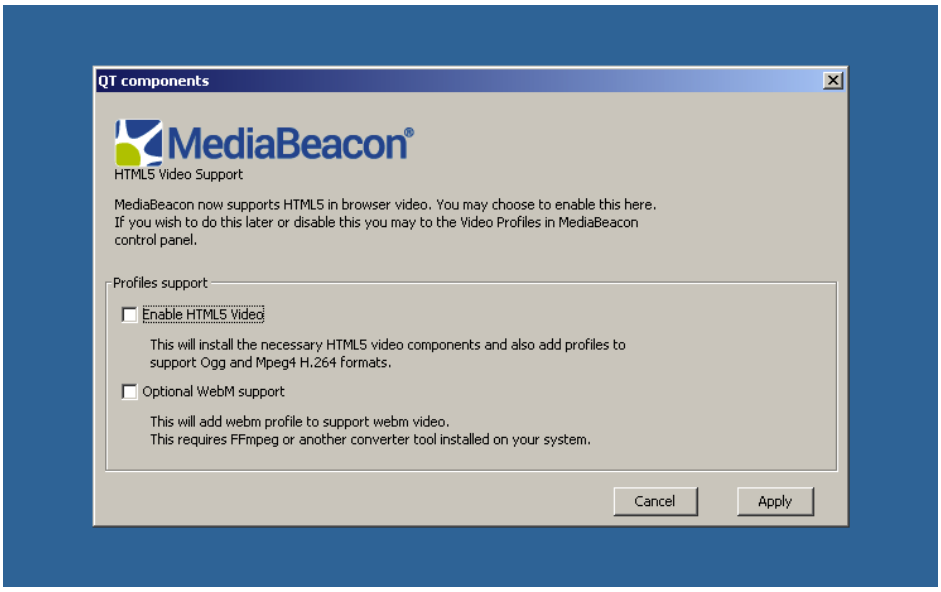


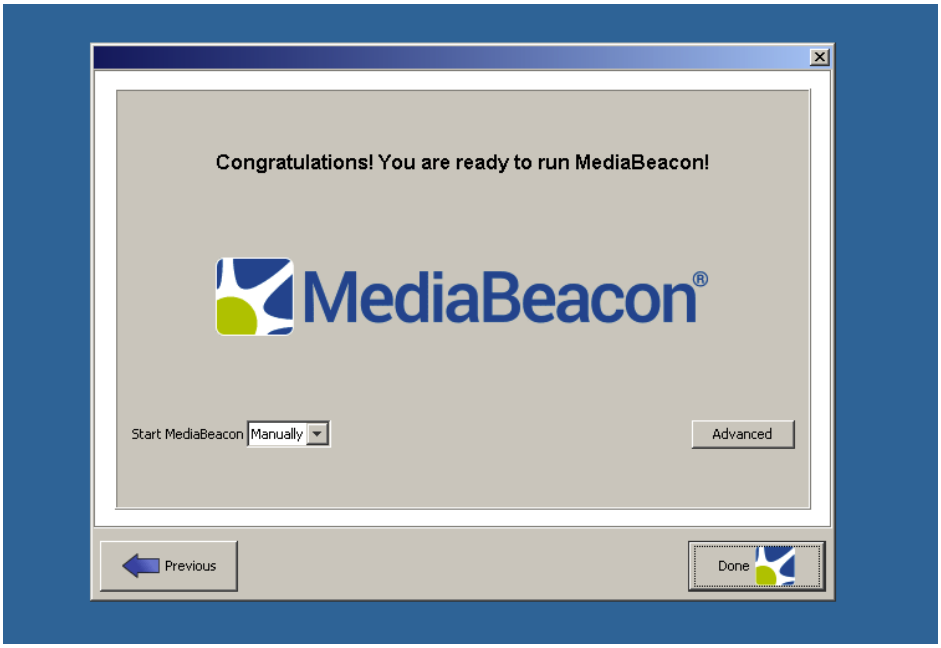
22. You must activate the license immediately, either by phone or online via the "Activate" and then "Activate Now" buttons.***Note: If your server does not have external internet access, you can use the Activate by phone option. For this option, you will call MediaBeacon and get a string to enter over the phone to activate***

23. Successful activation allows full use of the application for the allotted license period.

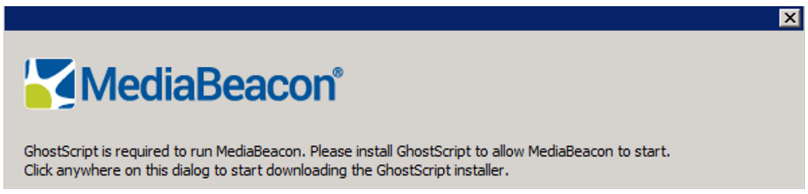


24. To configure HTML5 video options. Select HTML5 to use HTML5 in the web interface to help play videos. Optional WebM support allows you to use an external video converter but requires configuration to work properly. You can leave these blank or click "Apply" to apply the selected options and then click "Done".



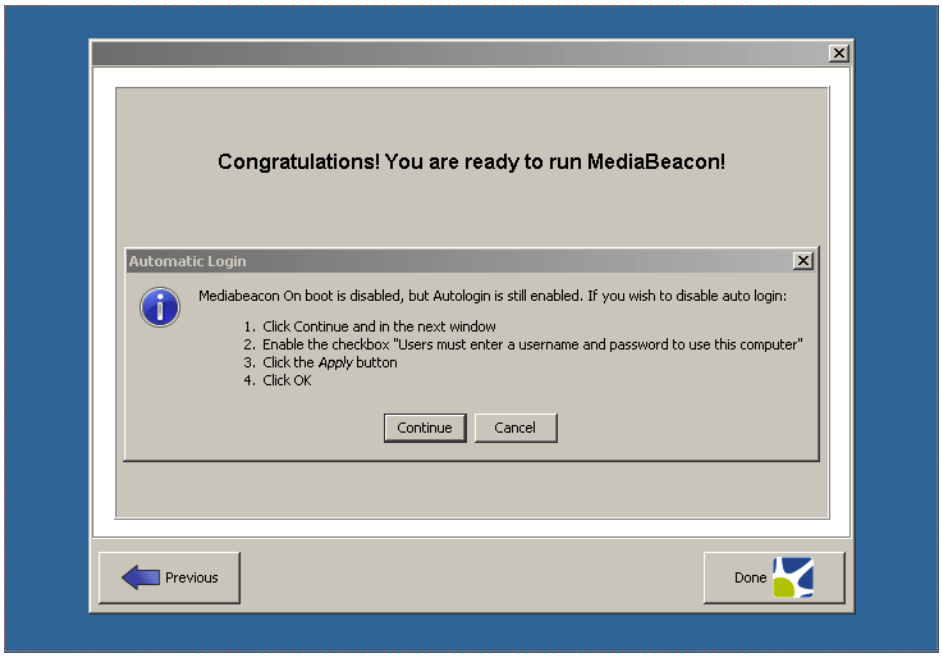


25. After confirming your settings, press Start MediaBeacon. A prompt window will appear for users to install GhostScript. Click the window will download the installer to your system.

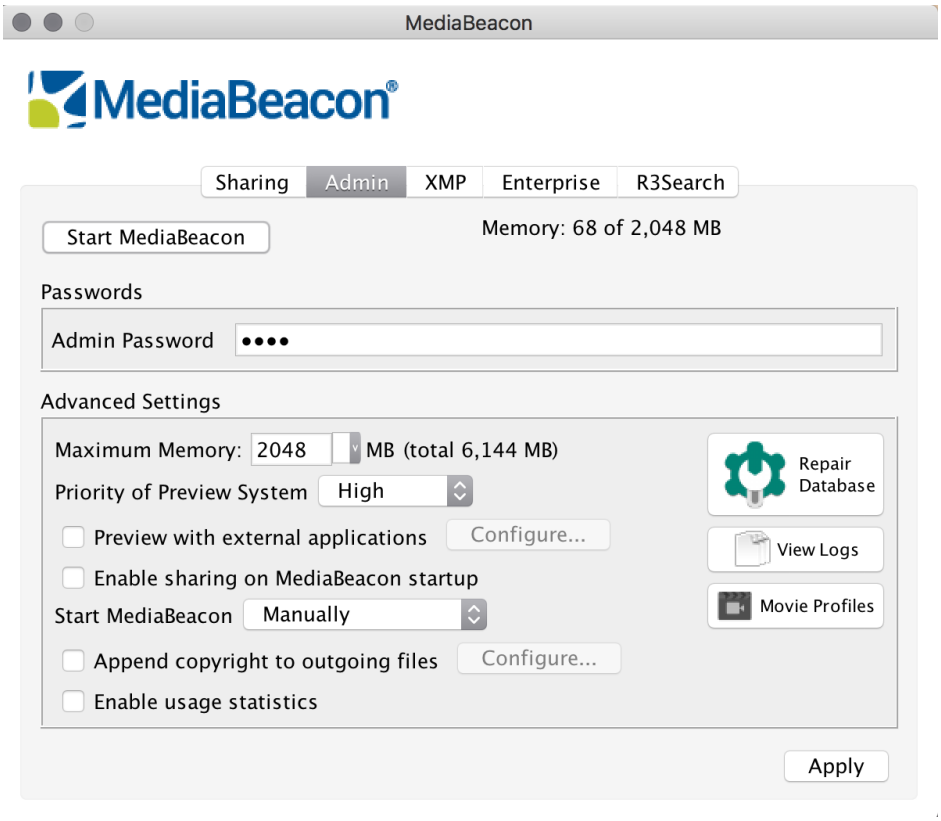


26. Run through and install GhostScript through the downloaded file. Then close the MediaBeacon application, re-open it, and press Start MediaBeacon.

27. The following dialog will provide you with the option and instructions for disabling auto login, if desired. Click "Continue" to go through the steps of disabling auto login, or click "Cancel" to keep auto login enabled. Then, click "Done" and you will be ready to configure your database and related settings in the Enterprise page.



28. Then, click "Done" and you will be ready to configure your database and related settings in the Enterprise tab of the admin GUI.



Please Note: After installing MediaBeacon, the first start will take several minutes, do not exit out or stop the process until it is complete. You can view progress at the bottom of the admin GUI.

1.2.2. Running MediaBeacon as a Windows Service

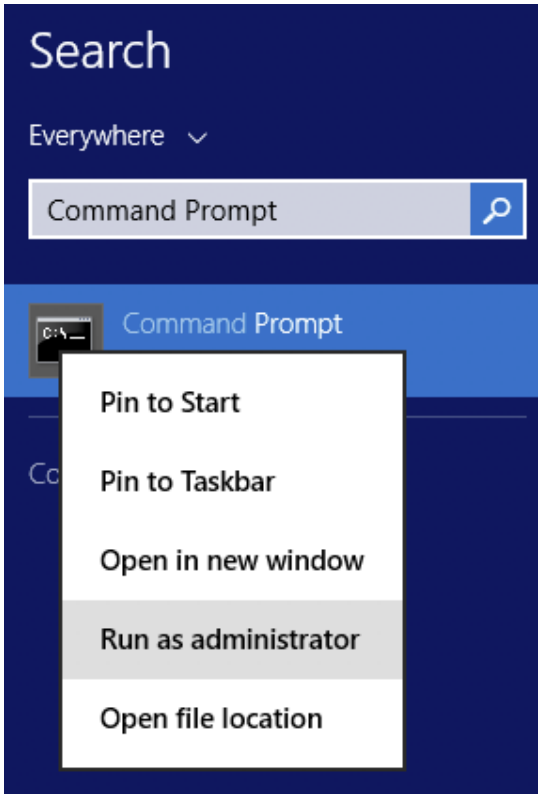
MediaBeacon can be run as a service on Windows. The following are intended to intended to be basic setup instructions.

Note that these instructions will need to be followed after any installation or upgrade of the MediaBeacon application.

Windows Service Installation

1. Ensure MediaBeacon is configured and running properly before proceeding with service installation steps.
   a. Note: To run MediaBeacon as a service, the service must be installed using the same Windows user account that was used for the initial MediaBeacon application installation
2. Stop MediaBeacon:
   a. In the MediaBeacon Server GUI application.
      a. Under the "Admin" tab: Click "Stop MediaBeacon".
   b. Open the Task Manager:
      a. Ensure that no tasks named "Java(TM) Platform SE Binary" are running.
   c. Exit the MediaBeacon Server GUI application.
3. Open a command prompt. The application must be run as the "Administrator". To do so:

a. Press the windows key
b. Click the search icon, enter "Command Prompt"
c. Right-click Command Prompt and choose "Run as administrator"



4. Determine if MediaBeacon services are installed on the system.
   a. `sc query mediabeacon`
5. If any service for MediaBeacon is shown:
   a. Change directory to the MediaBeacon installation, which is typically C:\Program Files\MediaBeacon\MediaBeacon.
      a. `cd C:\Program Files\MediaBeacon\MediaBeacon`
   b. Uninstall using the following command.
      a. `bin\prunsrv.exe //DS//mediabeacon`
6. Edit etc\mb_inst.bat.
   a. Notes:
      a. Ensure you are using a plain text editor.
      b. In a standard install this is located at: C:\Program Files\MediaBeacon\MediaBeacon\etc\mb_inst.bat.
   b. Confirm that the various file paths to MediaBeacon's binaries are accurate. The C:\Program Files\mediabeacon\mediabeacon strings should be replaced with the actual install location if MediaBeacon is installed to a non-default location:
      a. PR_INSTALL line.
      b. PR_CLASSPATH line, multiple paths.
      c. PR_LIBRARYPATH line, multiple paths.

d. The line under "REM Install Service".
e. PR_JVMOPTIONS line, the C:\Program Files\MediaBeacon\MediaBeacon strings should be replaced with the actual install location ifMediaBeacon is installed to a non-default location:

a. -Dmb.root=C:\Program Files\Mediabeacon;-Dmb.force.mb.service=true;-Dfile.encoding=UTF-8;

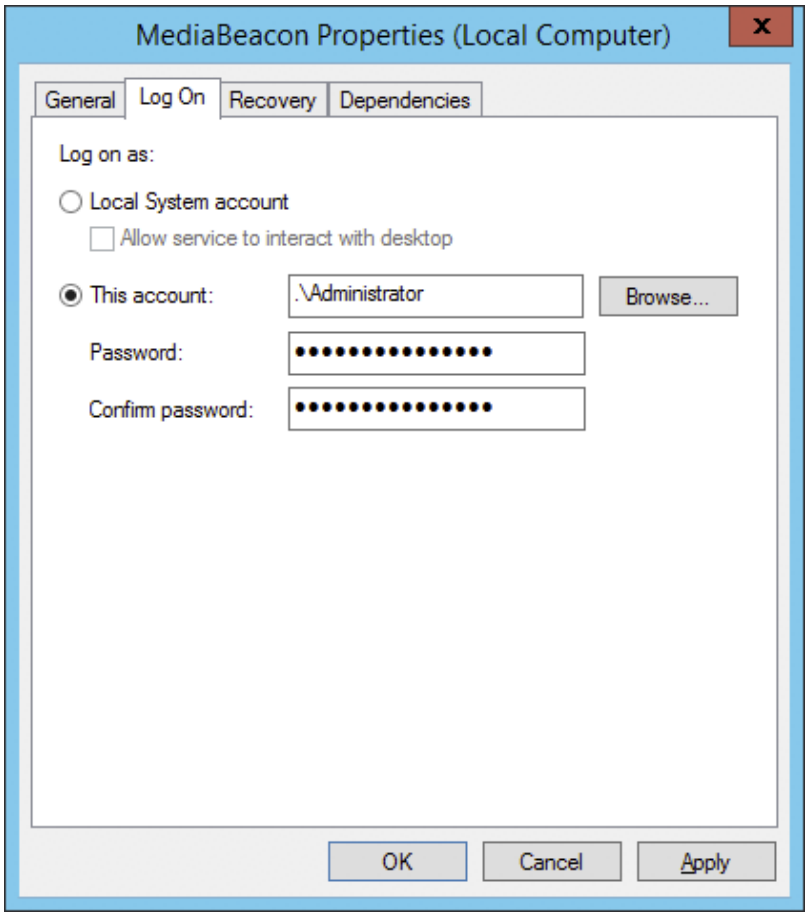
c. Update the PR_JVMMX variable to match the "Maximum Memory" set on the Admin tab of the MediaBeacon Server GUI application (which, in turn, should be set to a value appropriate to the server's use and resources). The default value of 4096 for the PR_JVMMX variable typically matches the default in the MediaBeacon application. If you're unsure of a proper value for your environment, please contact MediaBeacon Support.
d. Do NOT, codify the PR_SERVICEUSER and PR_SERVICEPASSWORD lines. These will be set in subsequent steps.

7. In the Command Prompt, run etc\mb_inst.bat to install the service.

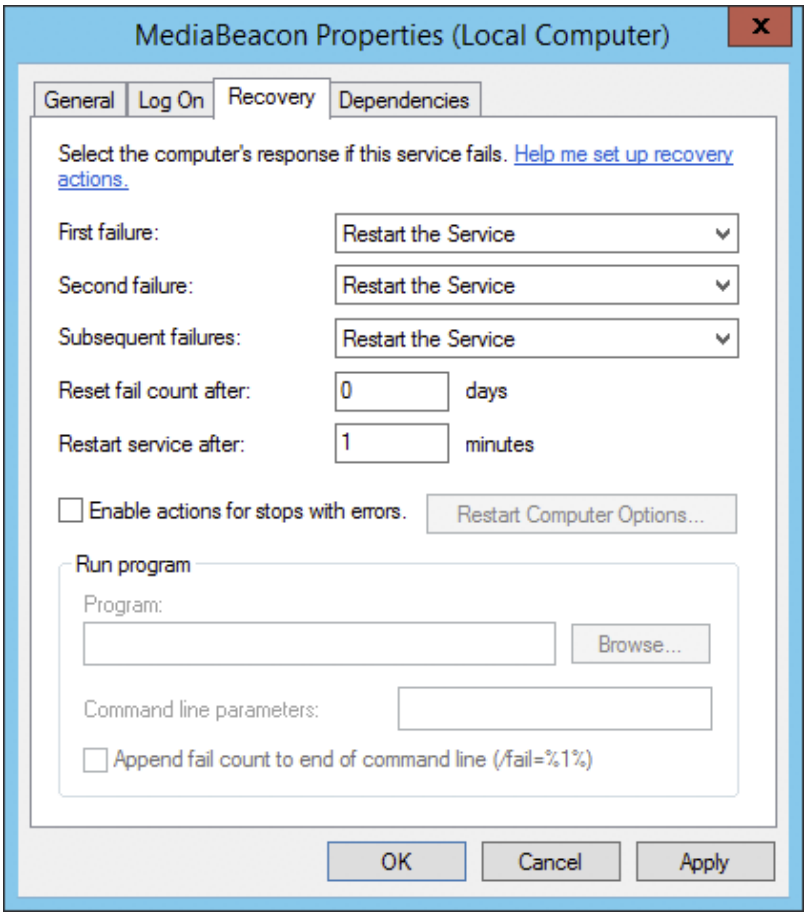
a. `etc\mb_inst.bat`
b. Note, use "Run as administrator" method, as above.

8. Set MediaBeacon service account information:

a. Open the Services application.
b. Right-click MediaBeacon service, choose "Properties".
c. Click "Log On" tab.
d. Enter the username and password of the windows user that the service will be run under. Note: This must match the Windows user account that was used for initial application install.
e. Click "Apply", Click "OK".



9. Optional: Set the MediaBeaconservice's Recovery options:
   a. Open the Services application.
   b. Right-click MediaBeacon service, choose "Properties".
   c. Click "Recovery" tab.
   d. First failure: Restart the Service.
   e. Second failure: Restart the Service.
   f. Subsequent failures: Restart the Service.
   g. Reset fail count after: 0 days.
   h. Restart service after: 1 minutes.
   i. Click "Apply", Click "OK".



j. Start MediaBeacon service: See instructions below.

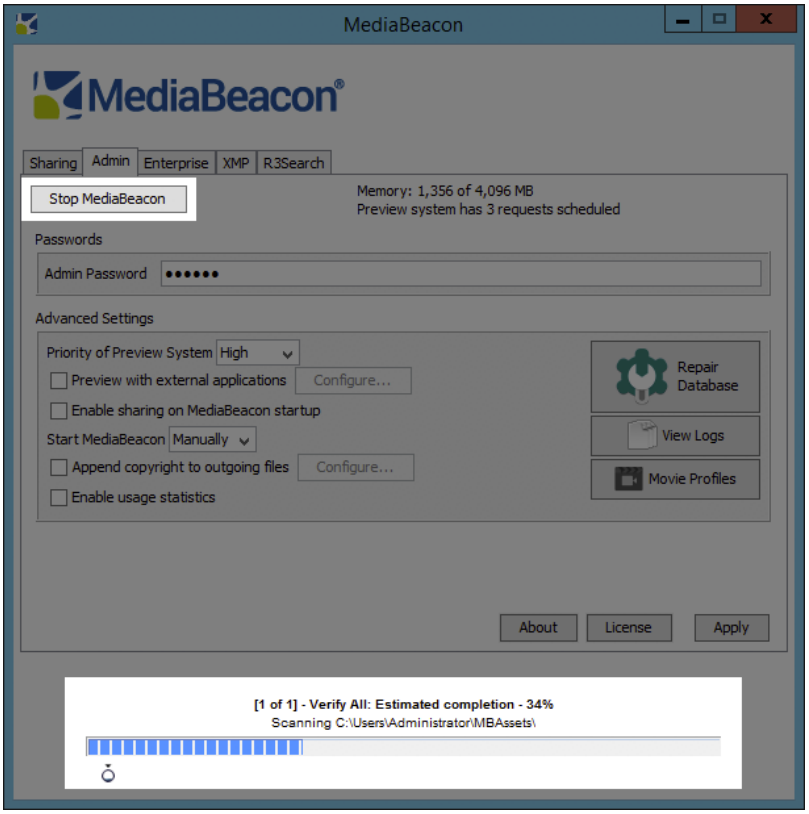
Starting and Stopping MediaBeacon Running as a Service in Windows

Starting

1. Open "Services" application:
   a. Right-click MediaBeacon service, choose "Start".
   b. MediaBeacon is now starting and needs no further intervention.
2. OPTIONAL: to monitor MediaBeacon's startup:
   a. Open MediaBeacon Server GUI application.

a. In the MediaBeacon Server GUI application, startup is indicated by

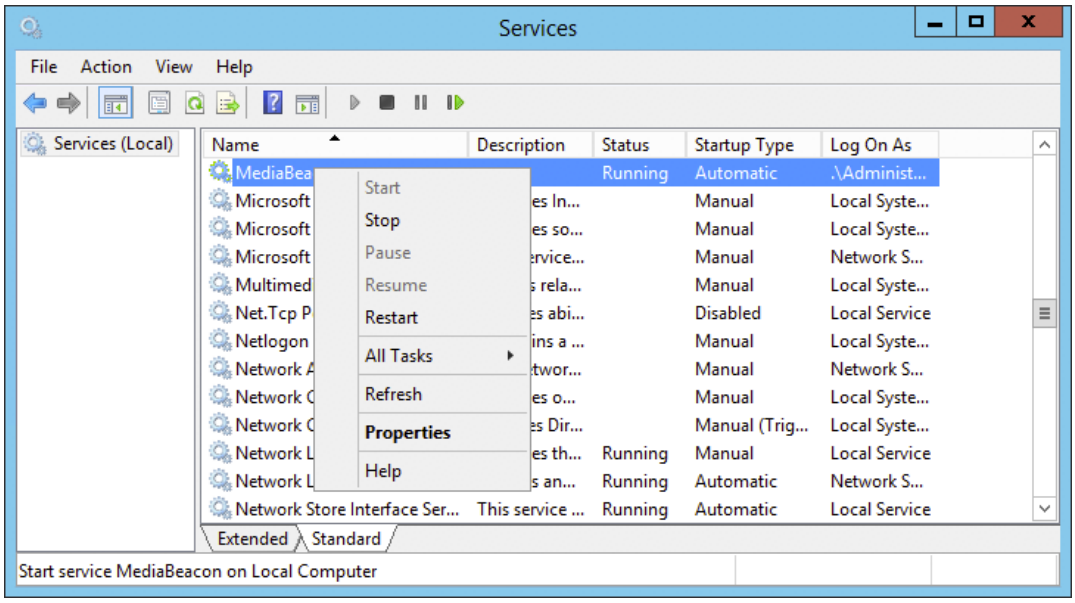
   a. The Start/Stop button (Under the "Admin" tab) is labeled "Stop MediaBeacon".
   b. The fly out panel is displayed.



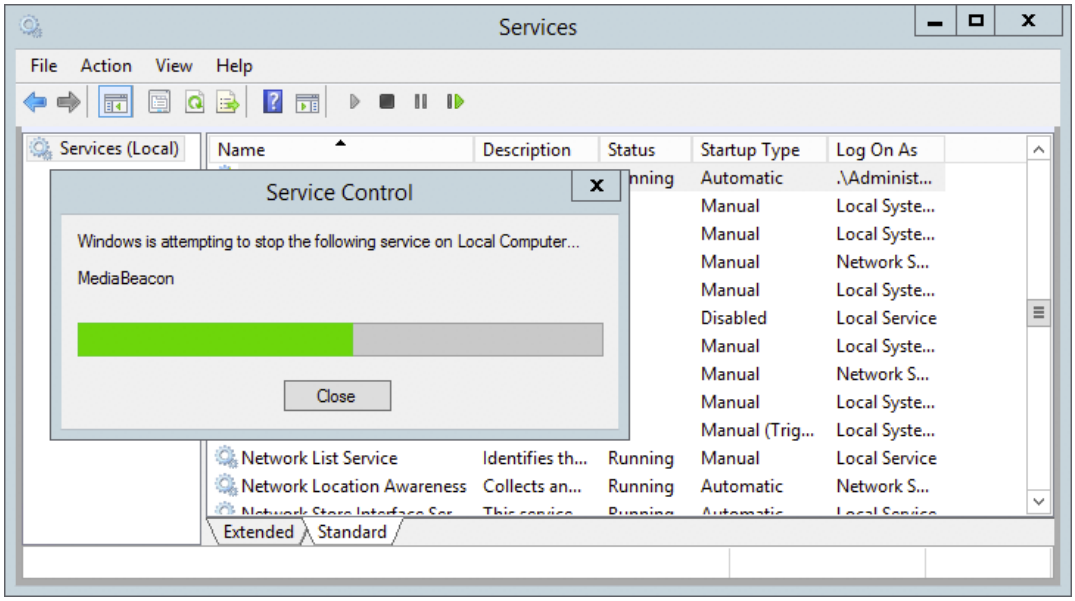
Stopping

1. Open "Services" application:

   a. Right-click MediaBeacon service, choose "Stop".

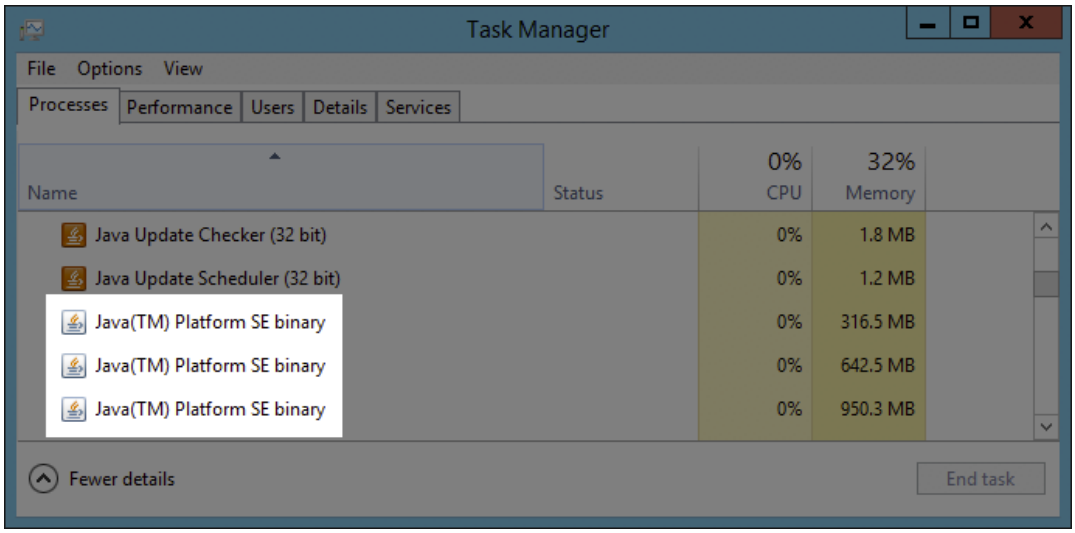


b. Wait for shutdown progress bar to finish.



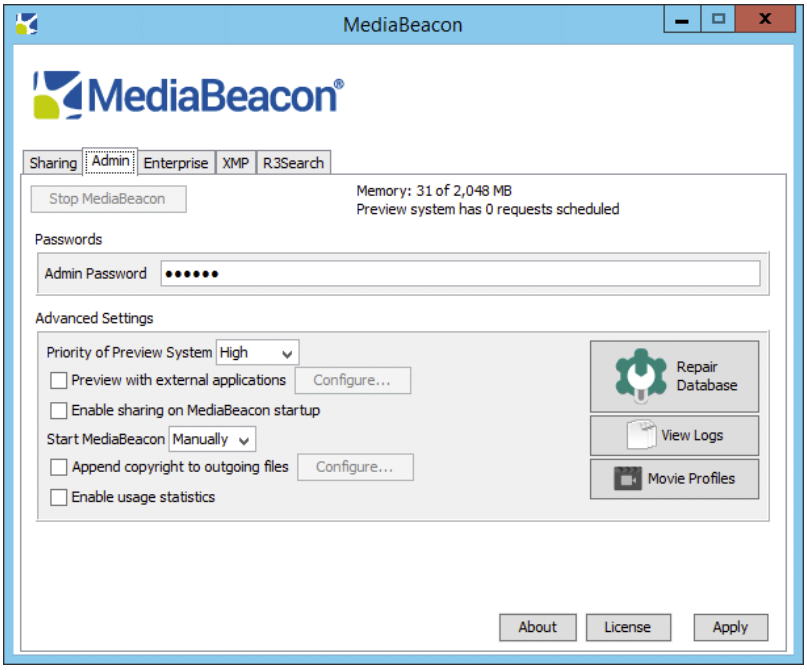
2. Open "Task Manager" application.

a. Ensure that no tasks named "Java(TM) Platform SE Binary" are running.



3. Shutdown MediaBeacon Server GUI application, if applicable:

   a. Under the "Admin" tab: The Start/Stop button will be greyed out and say "Stop MediaBeacon" (indicating that is shut down)



   b. Exit the MediaBeacon Server GUI application using the "X" icon in upper left of application window.

1.3. MediaBeacon System Requirements

Hardware

The following are the minimum requirements for MediaBeacon on a distributed system configuration with roughly 500k assets and about 200 concurrent users. MediaBeacon requires high throughput and low latency connections of no more than 1500ms for database access, 1000ms for disk access, and 5ms for connections to distributed components. These are minimum requirements, so hardware capabilities can be increased as needed.

Hardware recommendations for the production, staging, and development environments in a distributed setup are:

Server Type	Production	Staging	Development
MediaBeacon Primary Server	16GB RAM, 8 Core CPU	8GB RAM, 4 Core CPU	4GB RAM, 2 Core CPU
Enterprise Search Engine	16GB RAM, 8 Core CPU	8GB RAM, 4 Core CPU	N/A
User Concurrency Pack	16GB RAM, 4 Core CPU (each)	8GB RAM, 4 Core CPU (each)	N/A
Preview	16GB RAM, 8 Core CPU	8 GB RAM, 4 CPU	N/A

Software

Operating Systems

- Windows Server 2008 R2+
- MacOS 10.10+

Supported Database Types

- Microsoft SQL Server 2008+
- MySQL5.5+

Supported Browsers

- Chrome 85+
- Mozilla Firefox 83+
- Safari 13+
- Microsoft Edge 85+
- Apple iOS 13+
- Android 11+

Compatible Versions of Third Party Integrations

- Aspera 3.7
- Vantage 5+ with license for Vantage Transcode, Vantage Analysis, and Metadata Conversion
- Microsoft Office 2011+
- LibreOffice

Software Included in Installation Package

- QuickTime x86, 7.1.0.210
- Java JRE 8, x64, 1.8.0_45
- Graphicsmagick, 1.3.18
- Imagemagick, 7.0.11
- Visual C++ Redistributable 2005 SP1, 8.0.56336
- Visual C++ Redistributable and 2008, 9.0.21022

No Longer Supported

- Chrome 47-79
- Firefox 43-74
- Safari 9.0-11
- Internet Explorer

2. Webhead_Manual_MediaBeacon_R3volution_8.6

2.1. Copyright Notice

© Copyright 2021 Esko Software BV, Gent, Belgium

All rights reserved. This material, information and instructions for use contained herein are the property of Esko Software BV. The material, information and instructions are provided on an AS IS basis without warranty of any kind. There are no warranties granted or extended by this document. Furthermore Esko Software BV does not warrant, guarantee or make any representations regarding the use, or the results of the use of the software or the information contained herein. Esko Software BV shall not be liable for any direct, indirect, consequential or incidental damages arising out of the use or inability to use the software or the information contained herein.

The information contained herein is subject to change without notice. Revisions may be issued from time to time to advise of such changes and/or additions.

No part of this document may be reproduced, stored in a data base or retrieval system, or published, in any form or in any way, electronically, mechanically, by print, photoprint, microfilm or any other means without prior written permission from Esko Software BV.

This document supersedes all previous dated versions.

PANTONE® Colors displayed in the software application or in the user documentation may not match PANTONE-identified standards. Consult current PANTONE Color Publications for accurate color. PANTONE® and other Pantone trademarks are the property of Pantone LLC. © Pantone LLC, 2015

Pantone is the copyright owner of color data and/or software which are licensed to Esko to distribute for use only in combination with Studio Visualizer. PANTONE Color Data and/or Software shall not be copied onto another disk or into memory unless as part of the execution of Studio Visualizer.

This software is based in part on the work of the Independent JPEG Group.

Portions of this software are copyright © 1996-2002 The FreeType Project (www.freetype.org). All rights reserved.

Portions of this software are copyright 2006 Feeling Software, copyright 2005-2006 Autodesk Media Entertainment.

Portions of this software are copyright ©1998-2003 Daniel Veillard. All rights reserved.

Portions of this software are copyright ©1999-2006 The Botan Project. All rights reserved.

Part of the software embedded in this product is gSOAP software. Portions created by gSOAP are Copyright ©2001-2004 Robert A. van Engelen, Genivia inc. All rights reserved.

Portions of this software are copyright ©1998-2008 The OpenSSL Project and ©1995-1998 Eric Young (eay@cryptsoft.com). All rights reserved.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/).

Adobe, the Adobe logo, Acrobat, the Acrobat logo, Adobe Creative Suite, Illustrator, InDesign, PDF, Photoshop, PostScript, XMP and the Powered by XMP logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Microsoft and the Microsoft logo are registered trademarks of Microsoft Corporation in the United States and other countries.

SolidWorks is a registered trademark of SolidWorks Corporation.

Portions of this software are owned by Spatial Corp. 1986 2003. All Rights Reserved.

JDF and the JDF logo are trademarks of the CIP4 Organisation. Copyright 2001 The International Cooperation for the Integration of Processes in Prepress, Press and Postpress (CIP4). All rights reserved.

The Esko software contains the RSA Data Security, Inc. MD5 Message-Digest Algorithm.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems in the U.S. and other countries.

Part of this software uses technology by Best Color Technology (EFI). EFI and Bestcolor are registered trademarks of Electronics For Imaging GmbH in the U.S. Patent and Trademark Office.

Contains PowerNest library Copyrighted and Licensed by Alma, 2005 – 2007.

Part of this software uses technology by GlobalVision. ArtProof and ScanProof are registered trademarks of GlobalVision Inc.

Part of this software uses technology by Qoppa Software. Copyright © 2002-Present. All Rights Reserved.

All other product names are trademarks or registered trademarks of their respective owners.

Correspondence regarding this publication should be forwarded to:

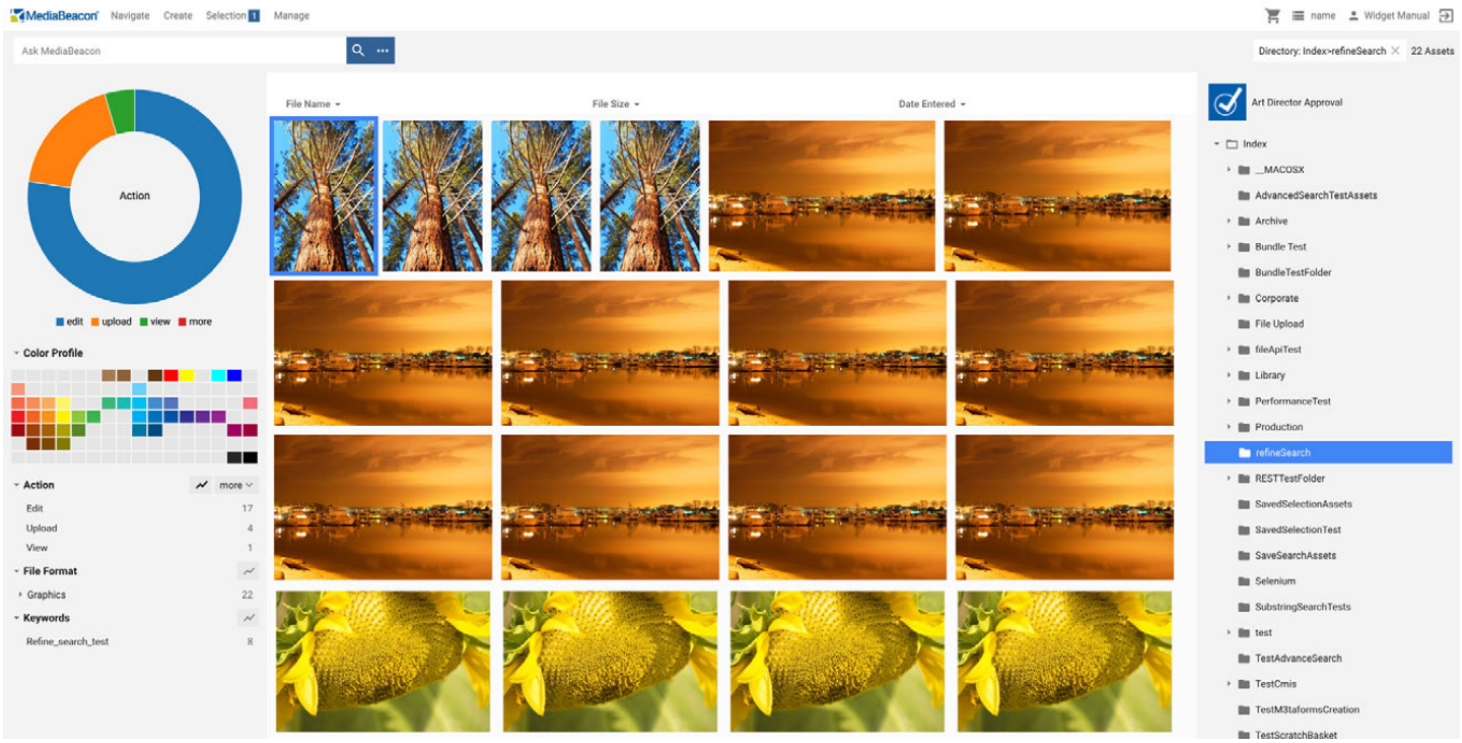
Esko Software BV

Kortrijksesteenweg 1095

B – 9051 Gent

info.eur@esko.com

2.2. Introduction



A MediaBeacon webhead is a copy of the MediaBeacon web interface that is deployed in an external appserver (e.g. Tomcat, WebSphere, WebLogic, etc.). Webheads have several main uses:

- Creating multiple web interfaces for load balancing and handling more concurrent user sessions.
- Advanced configuration. For example, administrators have more granular control of memory and other settings in Tomcat versus the built-in Jetty web server.
- Advanced configuration. For example, an administrator could theoretically modify the webapp contents in an external server, whereas MediaBeacon's built-in webapp is read-only.

This manual provides basic information on how to install an external MediaBeacon webhead. For configuration questions not addressed here, please contact MediaBeacon Support.

Please email us at support@mediabeacon.com if you find any incorrect or missing information. Send screenshots and/or refer to page numbers in this document where applicable.

2.3. Webhead Installation: Windows

This section will guide administrators through the process of installing a MediaBeacon webhead on Windows.MediaBeacon supports Windows 2008 R2 – Windows Server 2012. 64-bit is required.

To follow these instructions, install the core MediaBeacon application and download the matching webhead .war file.

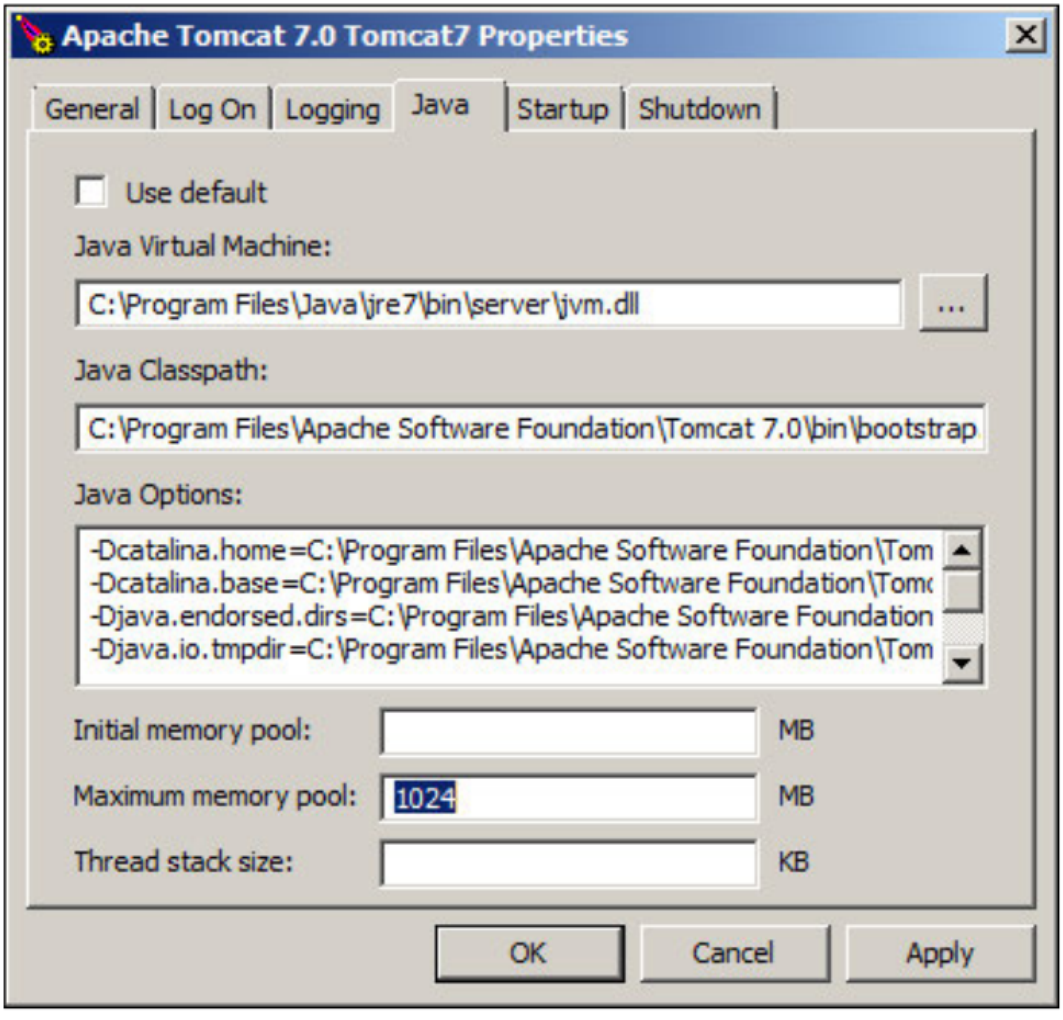
1. If the webhead is being deployed on a separate server from MediaBeacon, be sure to install a matching version of Java, either through the MediaBeacon installer or manual download.
2. Copy these files from a core MediaBeacon installation (e.g. C:\Program Files\ MediaBeacon \MediaBeacon\lib) to the JRE's library extensions (e.g. C:\Program Files\Java\jre1.8.0_91\lib\ext):

- jniwrap.jar
- slf4j-api.jar
- winpack.jar
- hfscharset.jar

3. Download and install Tomcat 8.0. Files and documentation are available here: http://tomcat.apache.org/ .
4. Copy these files from a core MediaBeacon installation (e.g. C:\Program Files\ MediaBeacon \MediaBeacon\lib) to the Tomcat 'bin' folder (e.g. C:\Program Files\Apache Software Foundation \Tomcat 8.0\bin):

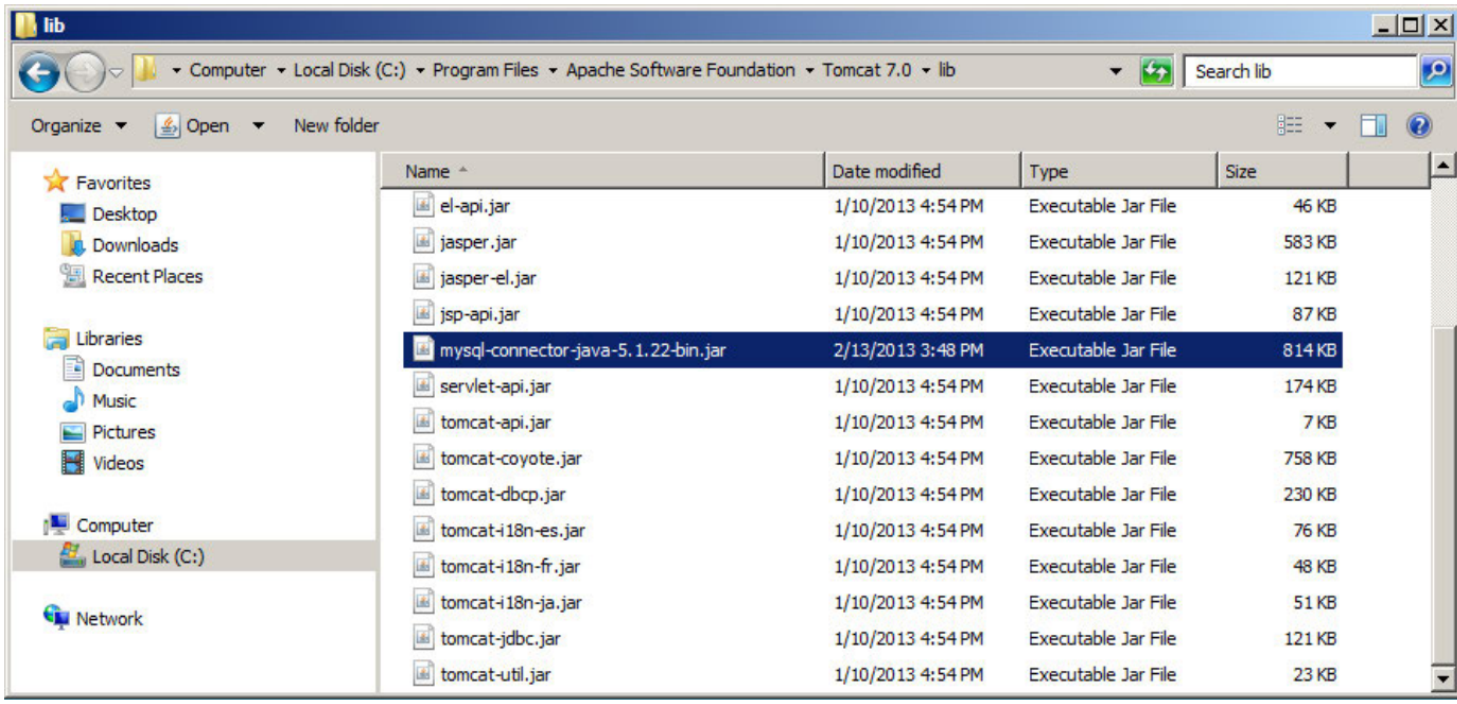
   - jniwrap.dll
   - jniwrap.lic
   - jniwrap64.dll

5. Once Tomcat is installed, open the "Configure Tomcat" application. In the "Java" tab, set the "Maximum Memory Pool" to 1024 MB. For higher loads, more memory may be required. Contact MediaBeacon Support with any questions.

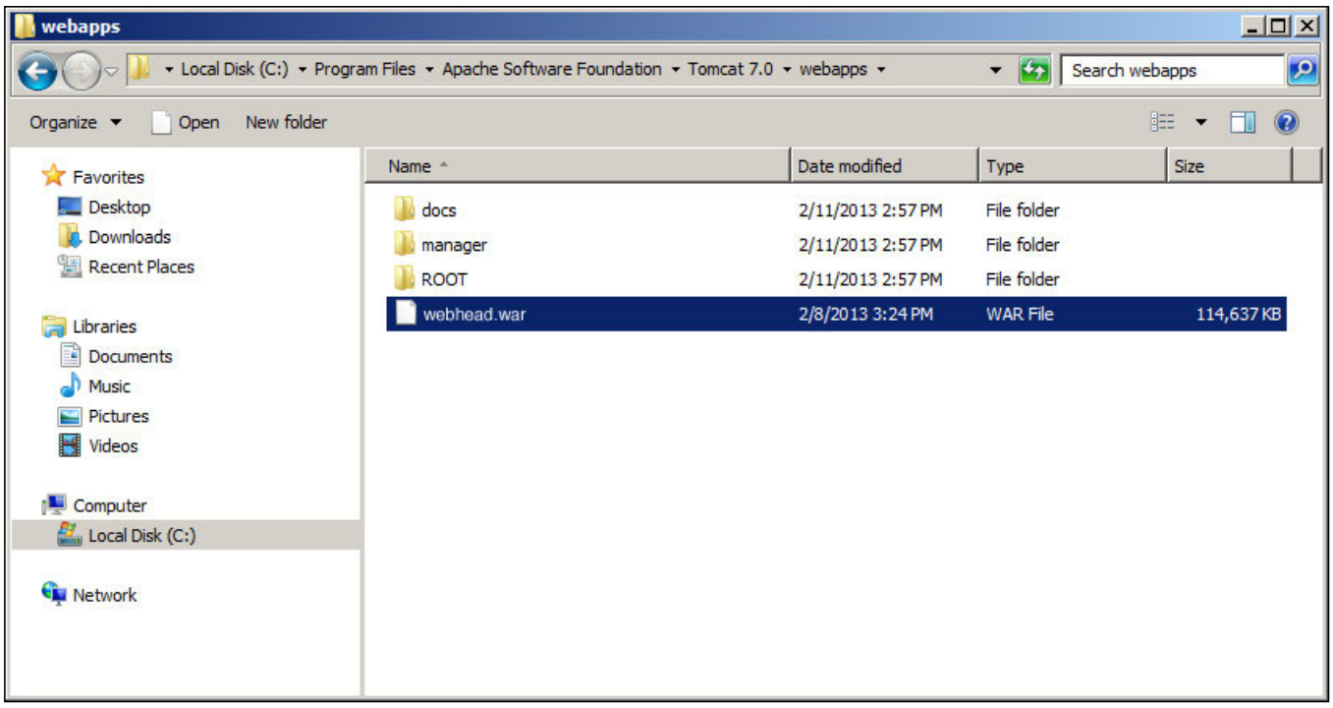


6. If using MySQL, locate the MySQL connector in the MediaBeacon installation. This file will be available afterMediaBeacon has connected to MySQL for the first time: C:\Program Files \MediaBeacon\MediaBeacon\lib\mysql-connector-java- 5.1.34-bin.jar

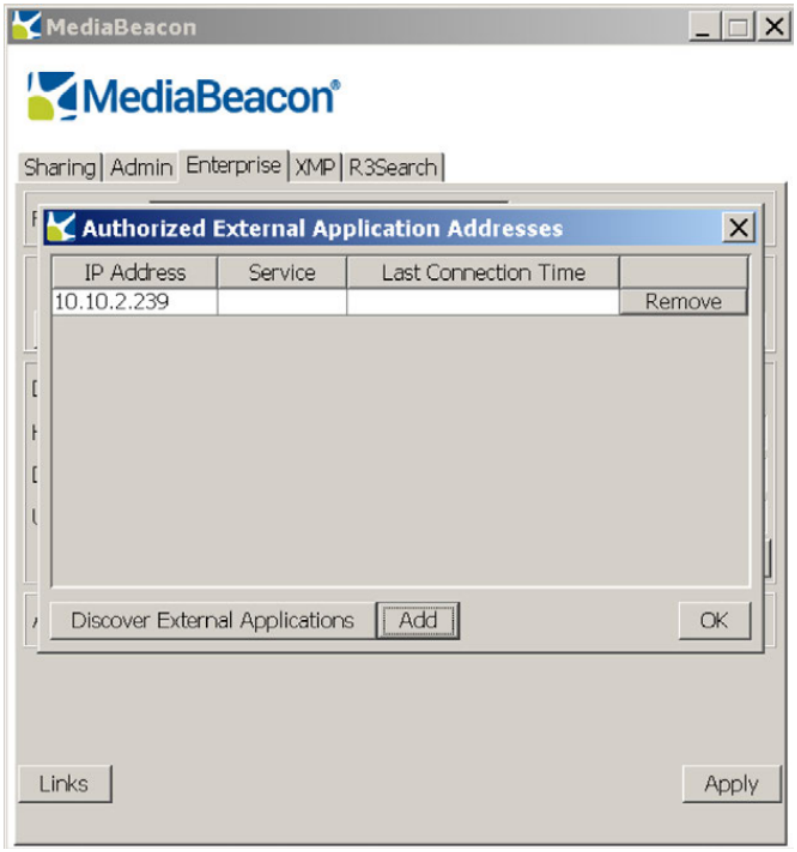
Copy it to the Tomcat library: C:\Program Files\Apache Software Foundation\Tomcat 8.0\lib



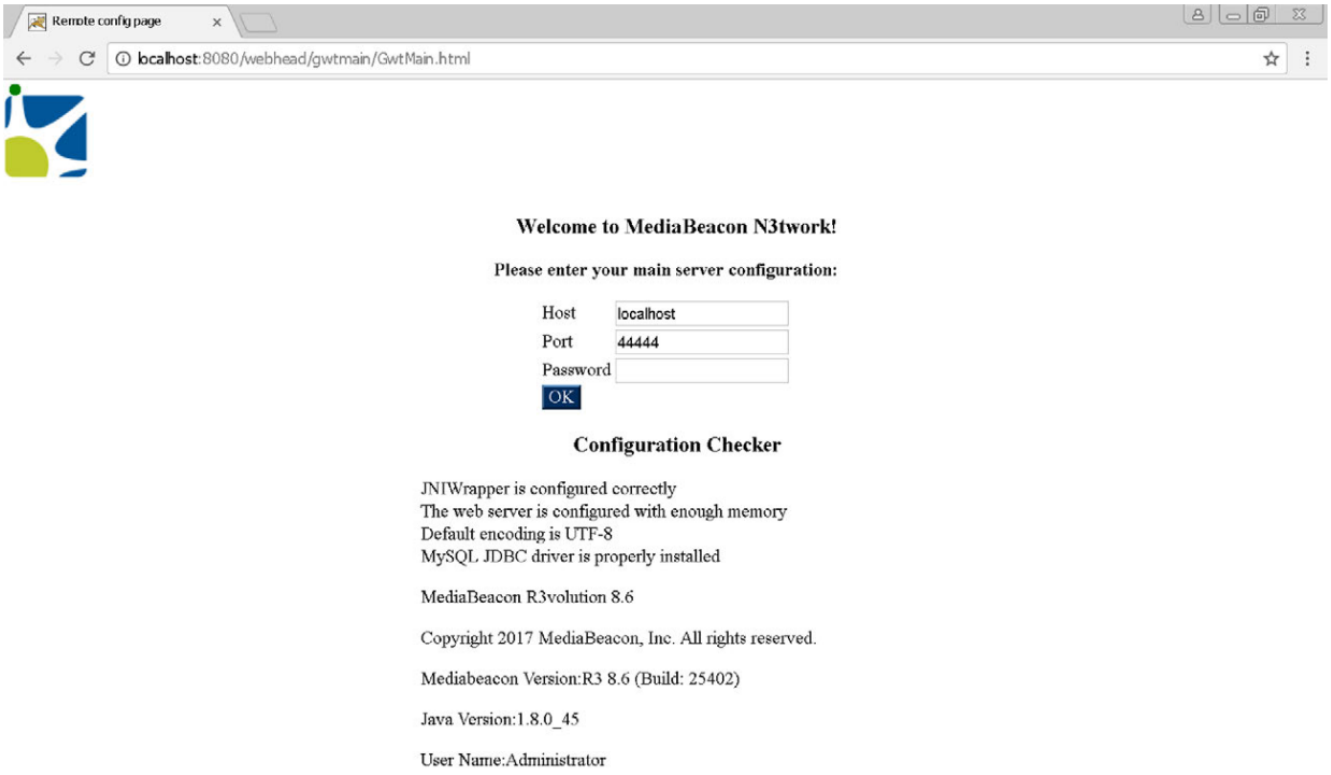
7. Rename the .war file to match the URL that should be used for accessing the webhead. For example, webhead.war will be accessed at http://localhost:8080/ webhead.
8. Copy the renamed .war file to: C:\Program Files\Apache Software Foundation\Tomcat 8.0\webapps.



9. MediaBeacon 8.x will not accept connections from external applications unless they are explicitly whitelisted on the main server. To allow a connection from the webapp:
   a. Go to the "Enterprise" tab on the main MediaBeacon server and click "Applications".
   b. Click "Add" and manually enter the IP address for the webapp. Alternatively, click "Discover External Applications." This will open a temporary 2-minute window during which remote applications are allowed to connect to MediaBeacon, automatically adding them to the whitelist.
   c. Click "OK".



10. Launch Tomcat.
11. Navigate to http://localhost:8080/webhead in a web browser (or whatever URL is appropriate, based on the name of the .war file). The browser will be redirected to remote_config.jsp for a first-time setup.



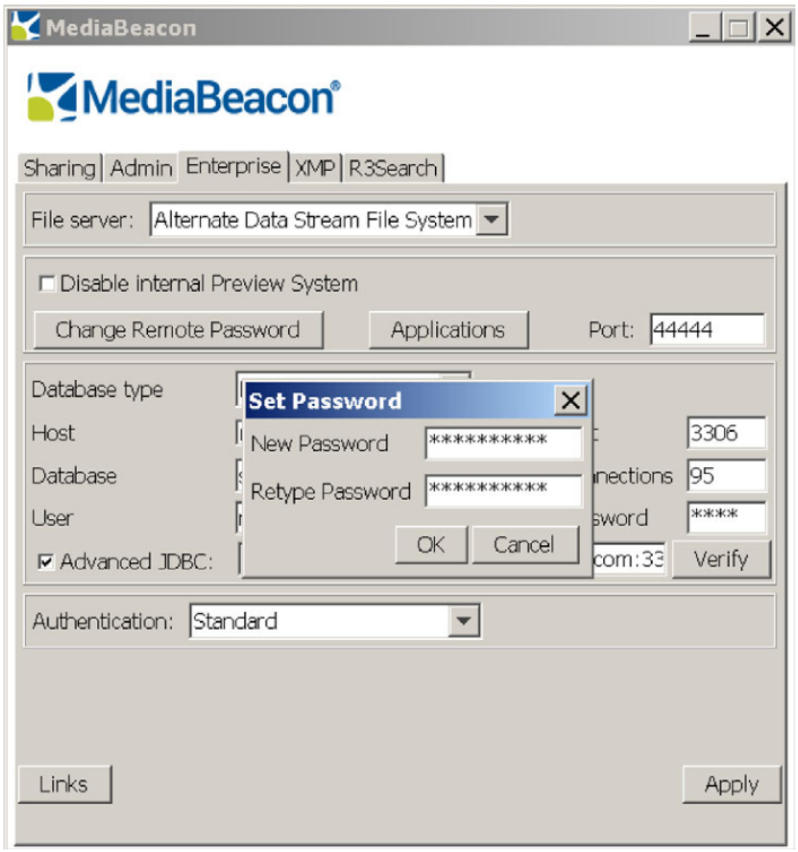
There shouldn't be any red icons in the Configuration Checker area. Enter the following information:

1. Host:

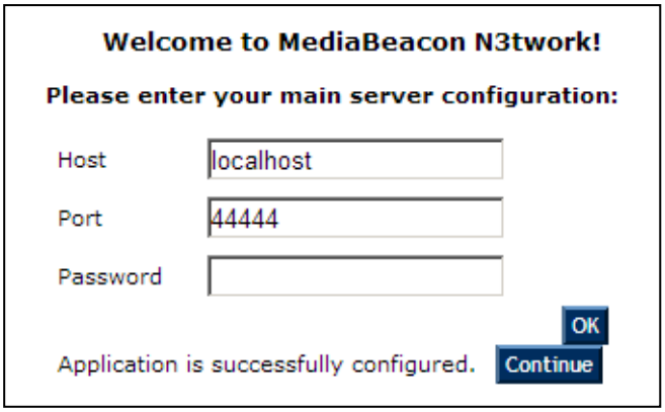
   Enter the IP address of the core MediaBeacon server relative to the webhead server. If they're both running on the same machine, localhost is fine.
2. Port:

   Use 44444, unless the value for the SOA port was changed on the "Enterprise" tab of the MediaBeacon R3volution server-side GUI application.
3. Password:

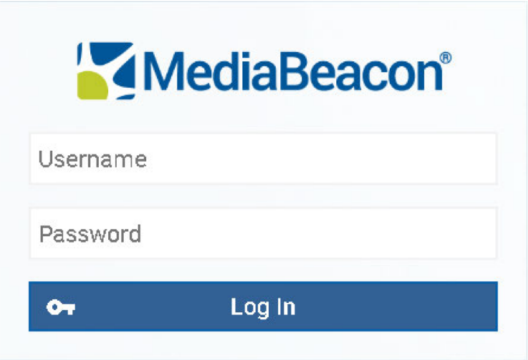
   The password is set via the "Change Remote Password" button on the "Enterprise" tab of the MediaBeacon R3volution server-side GUI application.



12. After entering the Host, Port, and Password, click "OK." A "Continue" button will display if the webhead was able to connect to the main MediaBeacon server.



13. Click "Continue" to proceed to the MediaBeacon login screen. The webhead is now available for use.



2.4. Port Information

Below are the default ports used to connect:

- Connects to MediaBeacon R3volution core: 44444, 44445, and 44446.
- Connects to R3Search node(s): 30000.
- Connects to Zookeeper(s): 31000.
- Connects to the database.
- Connects to external authentication server, if in use (Active Directory, LDAP, etc.).

3. Remote MediaBeacon Preview Nodes

3.1. Introduction

MediaBeacon's R3volution product has been designed to grow from one server with multiple applications to a multi-server cluster. Additional servers on the LAN that are connected to the main instance of MediaBeacon are called Remote MediaBeacon Nodes. These are individual applications that are designed to offload processes from the primary MediaBeacon server and to increase the speed with which certain operations are performed. The Nodes are available as an option with MediaBeacon's N3twork Application Bundle and include the Importer Node, Preview Node, and Events Node. Each node can be installed and configured on designated hardware and collaborates with the main MediaBeacon services. Remote MediaBeacon Nodes are available for MediaBeacon Enterprise Pro only. As the demands grow for MediaBeacon to perform tasks faster and more efficiently, additional nodes can be added.

Note: Additional fees may apply for any or all additional nodes added to the system. Nodes are part of the licensing agreement with MediaBeacon, Inc.

This document will describe the Preview Node and outline the process for installation, configuration, and setup, with detailed step-by-step instructions. Further training is available by contacting a MediaBeacon representative or accessing the MediaBeacon resources page: *https://www.mediabeacon.com/resources*.

Note:

For additional information or technical questions, please contact the MediaBeacon sales and support team:

sales@mediabeacon.com *support@mediabeacon.com* https://*www.mediabeacon.com/resources*

3.2. Description

The *MediaBeacon Preview* application allows the offloading of asset previewing and conversion from the main MediaBeacon R3volution server. Dedicated servers running *MediaBeacon Preview* are referred to internally as "preview nodes". There can be several nodes attached to a single MediaBeacon server.

3.3. Initial configuration

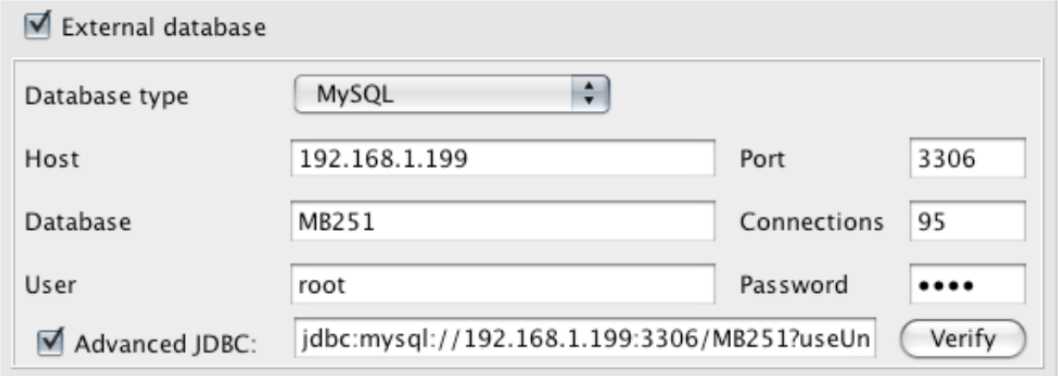
There are a few requirements that have to be met in order to use the Preview service:

1. Preview must be able to access the same database as the primary MediaBeacon server.
2. Preview must be able to mount the *Shared Files Directory* from the primary MediaBeacon server.
3. The IP address of the Remote Preview Node must be whitelisted on the "Enterprise" tab under "Applications" of the main MediaBeacon server.
4. On Mac, install Java 8, which is required to run MediaBeacon 8.0. Download it from:

http://www.oracle.com/technetwork/java/javase/downloads/jre8-downloads-2133155.html

3.3.1. Database Requirements

When configuring the database settings within MediaBeacon, be sure to use a hostname or IP address that is accessible outside of the primary MediaBeacon server. If *127.0.0.1* or *localhost* is used as the host, Preview assumes that the database is on the same system as itself, and not the primary server.

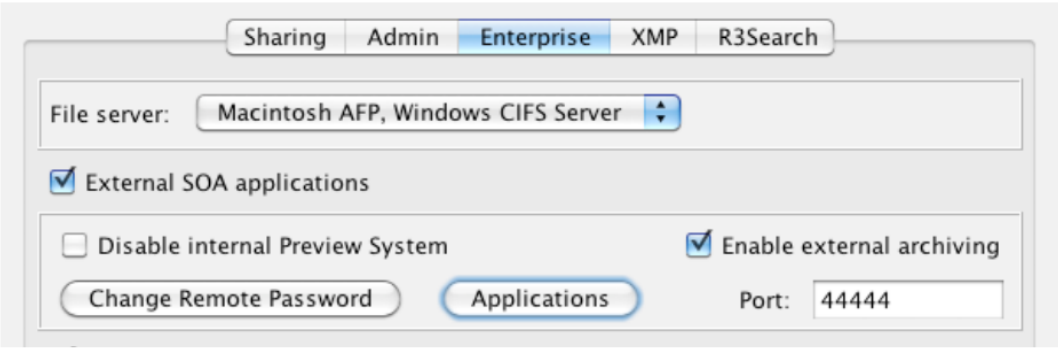


Above is an example of a valid database configuration on the MediaBeacon server.

3.3.2. Database Ports

For the database server, make sure the necessary port is open for database access between the database and the Preview node (typically '3306' for MySQL, '1521' for Oracle, and '1433' for Microsoft SQL Server). Verify that database logins are allowed from the Preview node and using the same database authentication information as the main MediaBeacon server. If MediaBeacon is using MySQL, Preview will need to download the JDBC driver and restart. This is an automatic process that requires access to the internet.

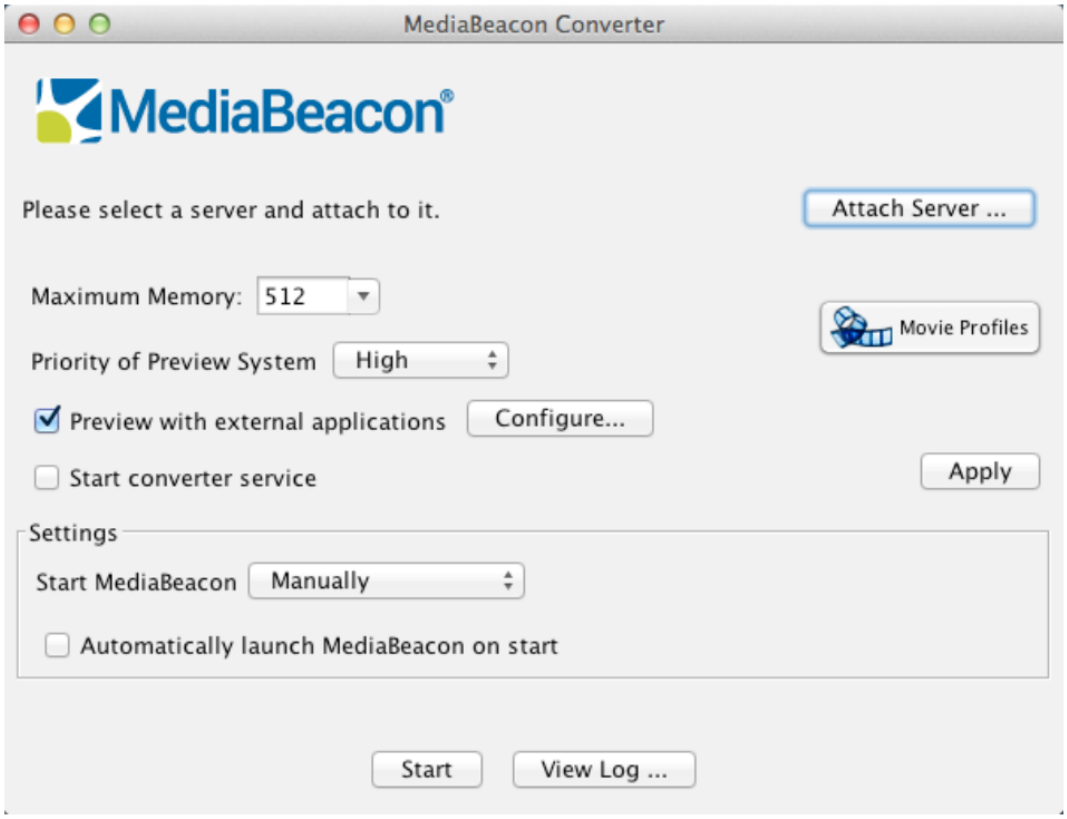
3.3.3. MediaBeacon Ports



Next, verify that the necessary ports are open on the main MediaBeacon server and the database server in order to allow the remote Preview server to connect to them. On the main MediaBeacon server, make sure the "External SOA applications" checkbox is checked under the Enterprise tab of the MediaBeacon server-side Admin Console, and that the port designated in the "Port:" field, and the port above it are allowed through any firewalls between the MediaBeacon server and Preview (the default port is '44444' so both 44444 and 44445 need to be open). Be sure to click on the *Change Remote Password* button in the *External SOA Applications* area and set a password in the windows that pops up. Make a note of this password, as it will be needed to connect Preview to the MediaBeacon server. After making the changes, restart MediaBeacon.

3.4. Preview Node Configuration

Here is Preview on initial launch:



3.4.1. External Application

MediaBeacon Preview requires external applications to preview certain asset types.

Windows

- Adobe InDesign (CS5, CS5.5, CS6, CC, CC 2014, CC 2015)
- Adobe InDesign Server
- Microsoft Excel (Office 2007+)

- Microsoft PowerPoint (Office 2007+)
- Microsoft Word (Office 2007+)
- Apache Open Office
- Adobe DNG Converter (handles RAW camera files)
- Adobe Flash (CS5, CS5.5, CS6, CC 2014, CC 2015)

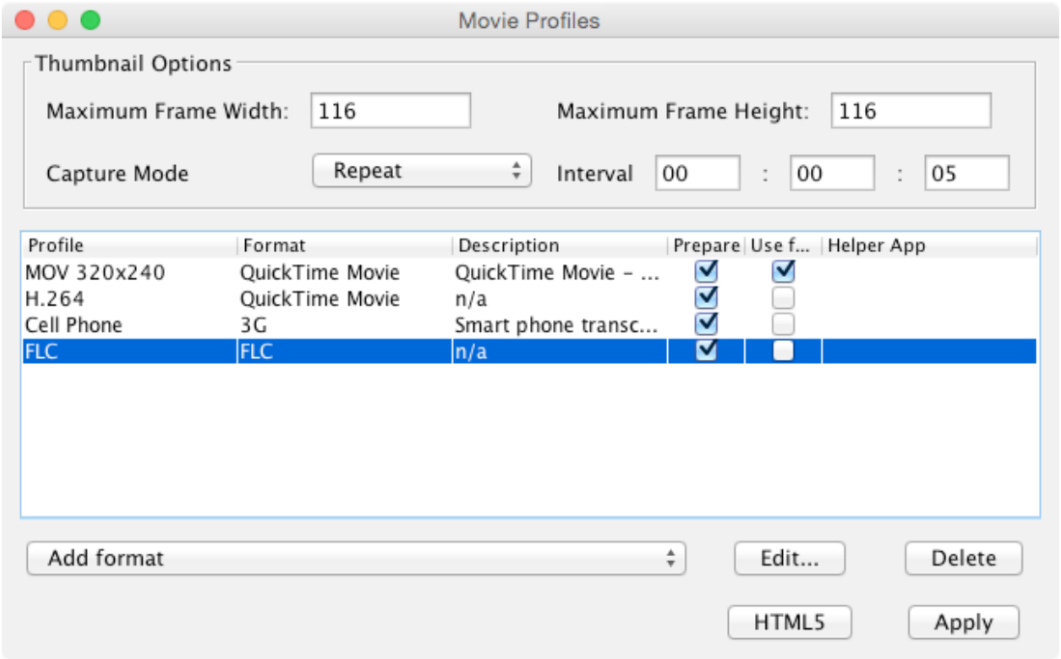
Once the desired applications have been installed on the Preview node, click the *Preview with external applications* checkbox and then the *Configure* button to bring up the window to the right. Choose the applications that Preview should use, and then restart the Preview application for the changes to take effect.

Ensure that the setup here matches that of the main MediaBeacon R3 server.

3.4.2. Start Converter Service

Checking this box allows the MediaBeacon Preview instance to field Loading Dock requests. If the MediaBeacon environment in question has the *Disable internal Preview System* checkbox set (on the *Enterprise* tab of the main MediaBeacon R3volution application), it should be noted that at least one of the MB Preview instances in the environment needs the *Start converter service* checkbox set for the Loading Dock to function. Otherwise all requests (whether conversions or *No Change* downloads) will sit and not become available for download

3.4.3. Movie Profiles

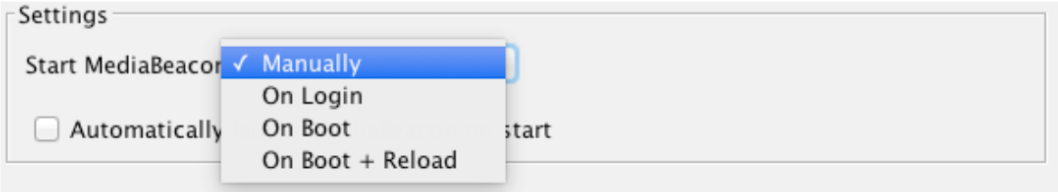


To configure video transcoding and video preview options, click on *Movie Profiles* to bring up the above window, which is identical to the one in the main MediaBeacon application. Ensure that the setup here matches that of the main MediaBeacon R3 server. If there are different codecs available, or different options for the codecs, check that the main MediaBeacon R3 server and preview node have the same

versions of QuickTime and any third-party codecs installed. Again, any changes here will require a restart of the MediaBeacon Preview application.

3.4.4. Launch Settings

Next, configure the launch settings. There are four options for launching Preview: Manually, On Login, On Boot, On Boot + Reload.



Manually: This option requires a user to manually launch the Preview application after the host system has finished booting up.

On Login: This will cause the Preview application to launch automatically upon login to the user account on the Preview server.

Automatically launch on start: This checkbox will automatically start the Preview service when the Preview GUI is launched, eliminating the need for the user to click on "Start."

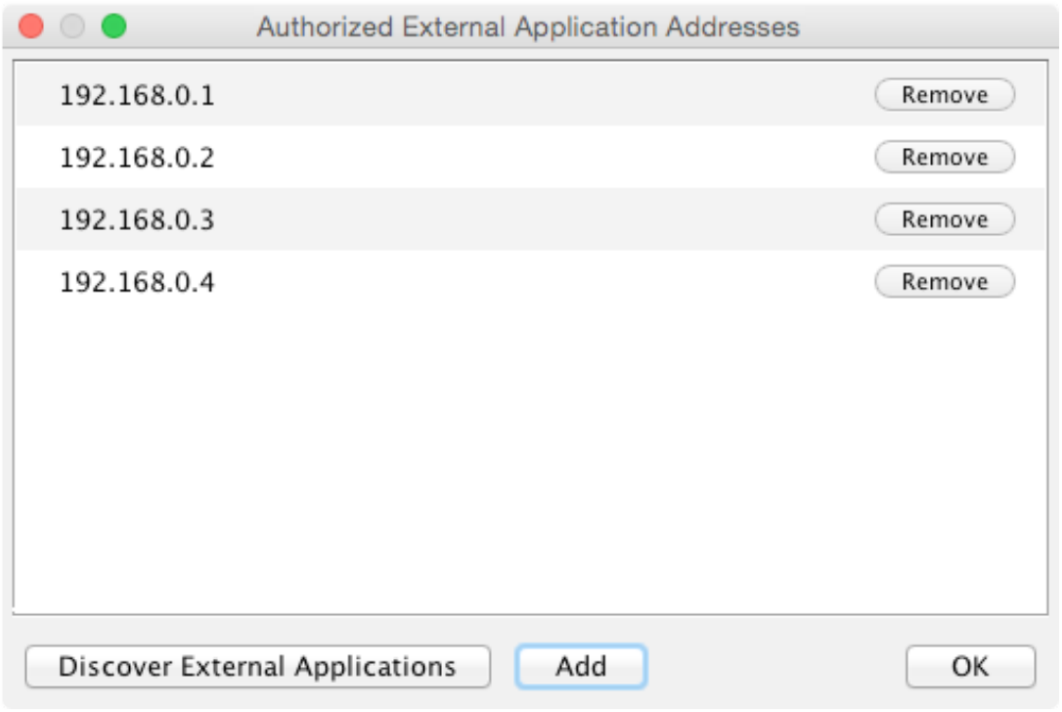
3.5. Connecting Preview to MediaBeacon

3.5.1. Mount 'Shared Files Directory'

Once Preview has been configured, mount MediaBeacon's *Shared Files Directory* to Preview's server with full read and write permissions via AFP or SMB. To do this on a Macintosh, press *Command-k*, enter the server's IP or hostname, and select the correct directory. On Windows, the remote directory must be mapped as a drive letter.

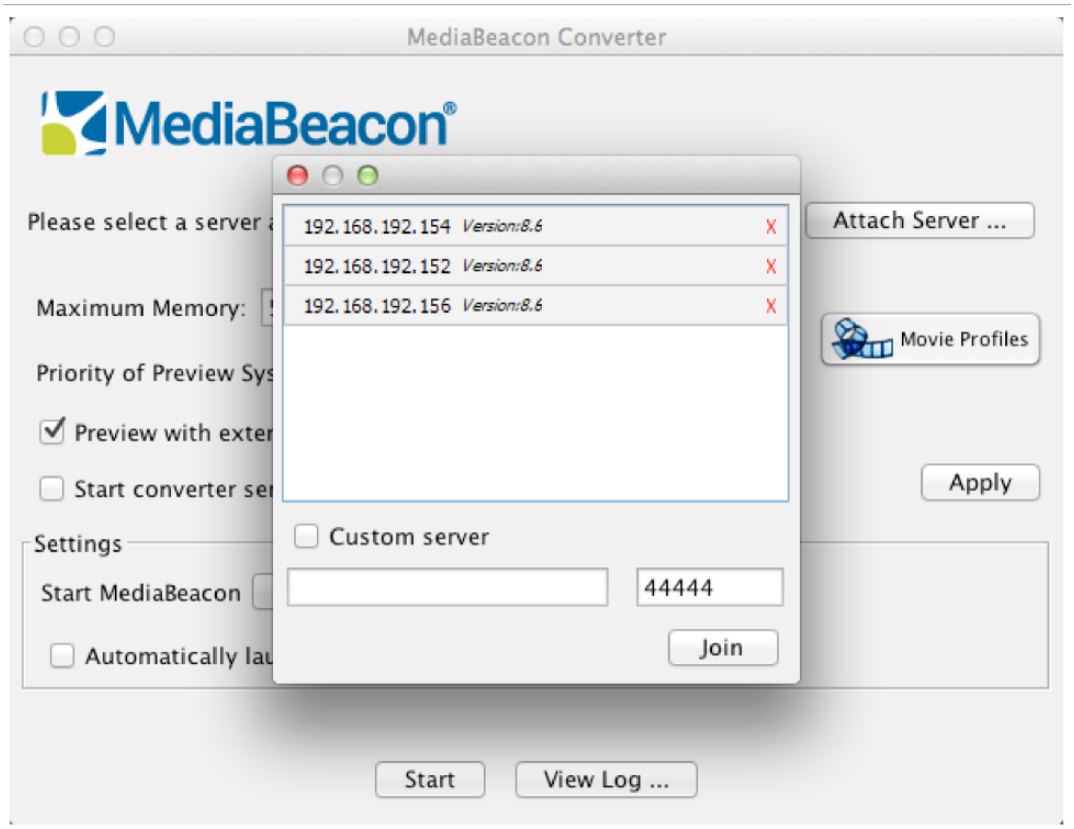
3.5.2. Whitelist Remote IP

By default, the main MediaBeacon server will disallow all remote connections from external applications. Before attaching to the main server, be sure to enter the Remote Preview Node's IP address in the "Enterprise" tab under "Applications". Alternatively, click "Discover External Applications." This will open a temporary 2-minute window during which the main server will accept incoming connections. Attaching to the server during the time will automatically add the Remote Preview Node to the whitelist.



3.5.3. Attach MediaBeacon Server

Next, connect to the main MediaBeacon server by clicking *Attach Server* on the Remote Preview Node. MediaBeacon Preview will automatically show all available MediaBeacon servers it can attach to.



Select appropriate server from the list, click *Join*, and enter the password. This password is set by clicking "Change Remote Password" in the *External SOA Applications* area of the main MediaBeacon server.

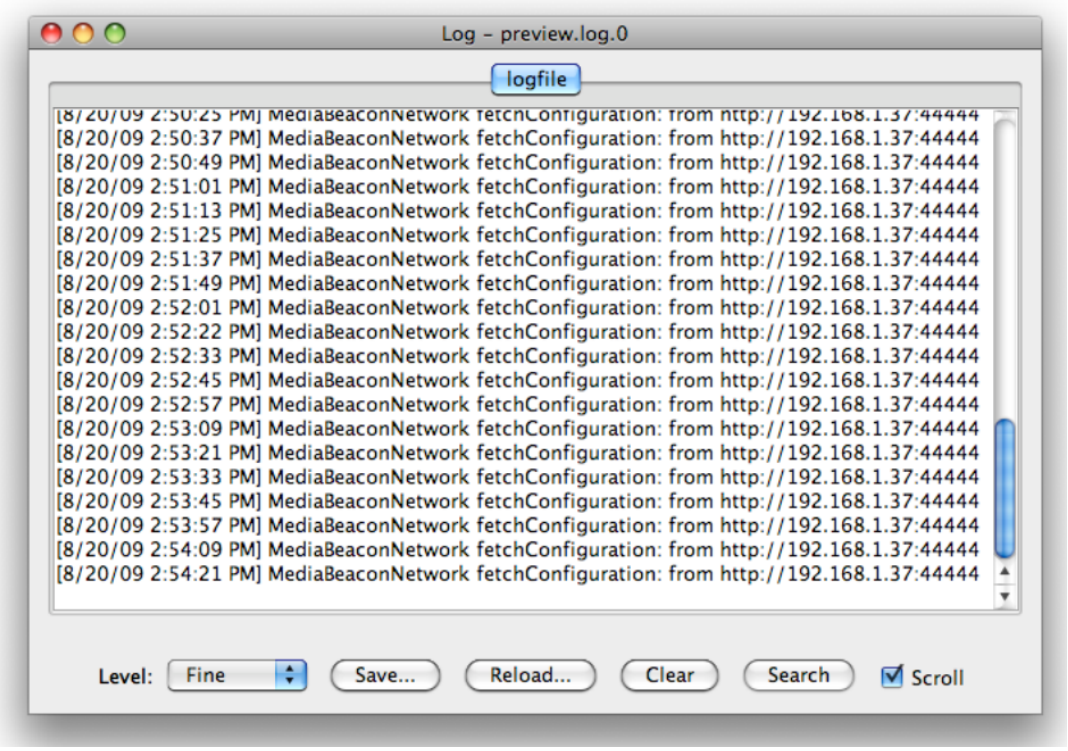
MediaBeacon N3twork uses Zero Configuration technology for dynamic discovery of nodes and XML-RPC for passing configuration. If the server doesn't show in the list, it's likely that a firewall is blocking the zero-config protocol used to generate the list, or the Preview node is on a different subnet than the main MediaBeacon server. In either case, simply check the *Custom server* checkbox and type the IP or hostname of the server in the field given, then click *Join*.

Note that port '44444' is just the default MediaBeacon uses for communications between the MediaBeacon server and Preview. If this port is unavailable it is possible to set another value in the *External SOA Applications* area and put that same port in this configuration dialog.

3.5.4. Starting Preview

After the password is accepted, Preview will automatically find the *Shared Files Directory* that's mounted on the preview node. Click *Start*. Preview will now start handling preview requests queued in the database for the main application.

3.6. Logging



Above is a screen shot of the logging system, accessible from the *View log ...* button. The logging system is like that used in MediaBeacon. If there are issues with previews, check the logs on the Preview node that handled the request.

3.7. Port Information

Below are the default ports used to connect.

- Connects to MediaBeacon R3volution core: 44444, 44445, and 44446.
- Connects to the database.
- Connects to the file system.

3.8. Running as a Windows Service

Before attempting to set this up, make sure you have MB Preview configured and working (not as a Windows service). This assumes you have attached to Core MediaBeacon R3volution already.

1. Edit the file 'etc\mb_preview_inst.bat' by doing the following:
   - Correct the path for Java.
   - Correct the paths for the MB Preview install location.
   - Correct the value for 'mb.mount.point'.
   - Select a good value for maximum memory ('PR_JVMMX', units are MegaBytes).
   - Correct the value for the OS account that runs MediaBeacon ('PR_SERVICEUSER').

2. In Windows' services area (ex. run 'services.msc' in Windows 'Run...' menu), use the LogOn tab in the 'MediaBeacon-Preview' service's Properties to set appropriate password for the OS account being used. Leave the default '********' placeholder in the .bat and set the password after service install to avoid storing the plain text password.
3. In the same Properties area, use the Recovery tab to set the three dropdown menus to 'Restart the Service' so it recovers automatically in the case of a crash.
4. Make sure MB Preview isn't running ('Stop' button in MB Preview GUI, check in Task Manager that there aren't stray 'java.exe' processes, kill them if so), then start the service in Windows' Services UI.
5. Check that 'prunsrv.exe' shows in the 'Details' tab of Task Manager, and that the subordinate 'java.exe' that launches comes up OK.

4. MediaBeacon R3volution R3search Cluster Manual 8.6

4.1. Copyright Notice

© Copyright 2021 Esko Software BV, Gent, Belgium

All rights reserved. This material, information and instructions for use contained herein are the property of Esko Software BV. The material, information and instructions are provided on an AS IS basis without warranty of any kind. There are no warranties granted or extended by this document. Furthermore Esko Software BV does not warrant, guarantee or make any representations regarding the use, or the results of the use of the software or the information contained herein. Esko Software BV shall not be liable for any direct, indirect, consequential or incidental damages arising out of the use or inability to use the software or the information contained herein.

The information contained herein is subject to change without notice. Revisions may be issued from time to time to advise of such changes and/or additions.

No part of this document may be reproduced, stored in a data base or retrieval system, or published, in any form or in any way, electronically, mechanically, by print, photoprint, microfilm or any other means without prior written permission from Esko Software BV.

This document supersedes all previous dated versions.

PANTONE® Colors displayed in the software application or in the user documentation may not match PANTONE-identified standards. Consult current PANTONE Color Publications for accurate color. PANTONE® and other Pantone trademarks are the property of Pantone LLC. © Pantone LLC, 2015

Pantone is the copyright owner of color data and/or software which are licensed to Esko to distribute for use only in combination with Studio Visualizer. PANTONE Color Data and/or Software shall not be copied onto another disk or into memory unless as part of the execution of Studio Visualizer.

This software is based in part on the work of the Independent JPEG Group.

Portions of this software are copyright © 1996-2002 The FreeType Project (www.freetype.org). All rights reserved.

Portions of this software are copyright 2006 Feeling Software, copyright 2005-2006 Autodesk Media Entertainment.

Portions of this software are copyright ©1998-2003 Daniel Veillard. All rights reserved.

Portions of this software are copyright ©1999-2006 The Botan Project. All rights reserved.

Part of the software embedded in this product is gSOAP software. Portions created by gSOAP are Copyright ©2001-2004 Robert A. van Engelen, Genivia inc. All rights reserved.

Portions of this software are copyright ©1998-2008 The OpenSSL Project and ©1995-1998 Eric Young (eay@cryptsoft.com). All rights reserved.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/).

Adobe, the Adobe logo, Acrobat, the Acrobat logo, Adobe Creative Suite, Illustrator, InDesign, PDF, Photoshop, PostScript, XMP and the Powered by XMP logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Microsoft and the Microsoft logo are registered trademarks of Microsoft Corporation in the United States and other countries.

SolidWorks is a registered trademark of SolidWorks Corporation.

Portions of this software are owned by Spatial Corp. 1986 2003. All Rights Reserved.

JDF and the JDF logo are trademarks of the CIP4 Organisation. Copyright 2001 The International Cooperation for the Integration of Processes in Prepress, Press and Postpress (CIP4). All rights reserved.

The Esko software contains the RSA Data Security, Inc. MD5 Message-Digest Algorithm.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems in the U.S. and other countries.

Part of this software uses technology by Best Color Technology (EFI). EFI and Bestcolor are registered trademarks of Electronics For Imaging GmbH in the U.S. Patent and Trademark Office.

Contains PowerNest library Copyrighted and Licensed by Alma, 2005 – 2007.

Part of this software uses technology by GlobalVision. ArtProof and ScanProof are registered trademarks of GlobalVision Inc.

Part of this software uses technology by Qoppa Software. Copyright © 2002-Present. All Rights Reserved.

All other product names are trademarks or registered trademarks of their respective owners.

Correspondence regarding this publication should be forwarded to:

Esko Software BV

Kortrijksesteenweg 1095

B – 9051 Gent

info.eur@esko.com

4.2. Introduction

R3Search is MediaBeacon's built-in enterprise search engine. R3Search is fast, powerful, and is designed to grow with your enterprise and data set. Whenever assets are added to the system, R3Search automatically updates its search index and correlates the new asset with all other existing assets. This index of asset relationships powers the facet search, QuickSearch, Color Search, Date Search, Metrics, and other MediaBeacon search tools.

For increased performance, especially with large data sets, R3Search can be distributed across multiple nodes, called clustering. Multiple nodes biggest benefit is having high availability. By having leader and slaves, the system can intelligently handle issues with nodes in the cluster by changing roles. With its scalable architecture, the cluster can be expanded at any time. As usage of the system and data set increases, more nodes can be added to maintain expected performance. R3Search can grow organically as needs grow, ensuring a consistent and responsive user experience across your enterprise.

4.3. When is Clustering Appropriate?

There is no defined line as to when clustering should take place. A general rule is: if a slow down during queries becomes noticeable, it may be time to consider clustering. This would normally happen on a system with millions of assets. By clustering, the index becomes distributed across multiple shards and decreases its size.

4.4. R3Search Cluster Components

A R3Search cluster contains three primary components: core MediaBeacon, shards, and Zookeepers.

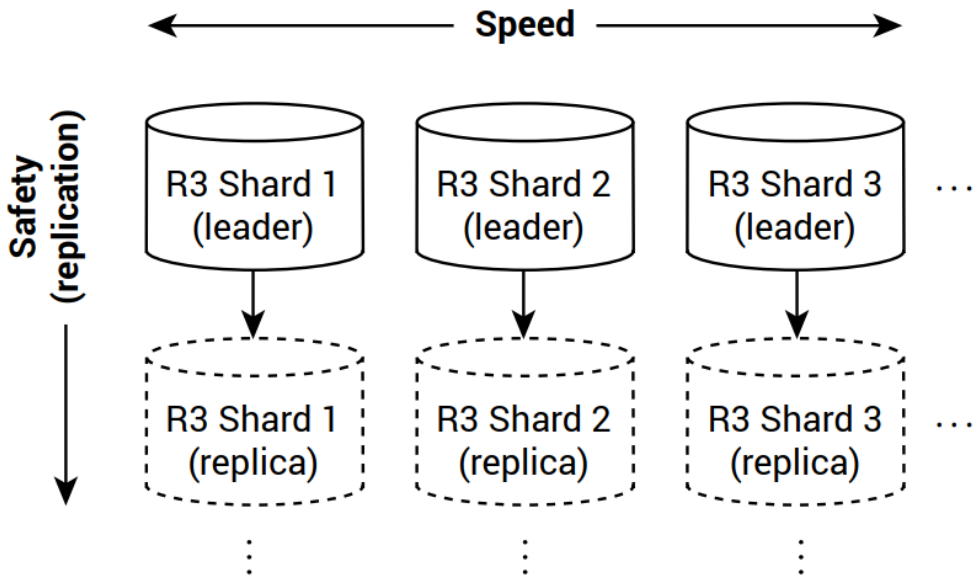
1. **Core MediaBeacon**

   Runs the user interface and serves as the central hub for all R3Search nodes and Zookeepers.

2. **Shards**

   Each shard is hosted on its own separate R3Search node, forming the cluster. There are two types of shards, leaders and slaves. Information is split across all the leaders and the Zookeepers track which leader has what info. Slaves under each leader are an exact copy of the data contained within its leader. (Multiple shards are not necessary for R3Search clustering.)

   Each leader that exists increases R3Search's ability to handle a large user load while additional slaves increase replication. See the diagram below for an example. Your setup can contain more or less leaders and slaves than what is depicted.



3. **Zookeepers**

   Zookeepers help track which leader shard has which data. It's important that if multiple Zookeepers exist, they are in an odd quantity. See the Redundancy in a Cluster section for more info.

4.5. Shard Configuration and Performance

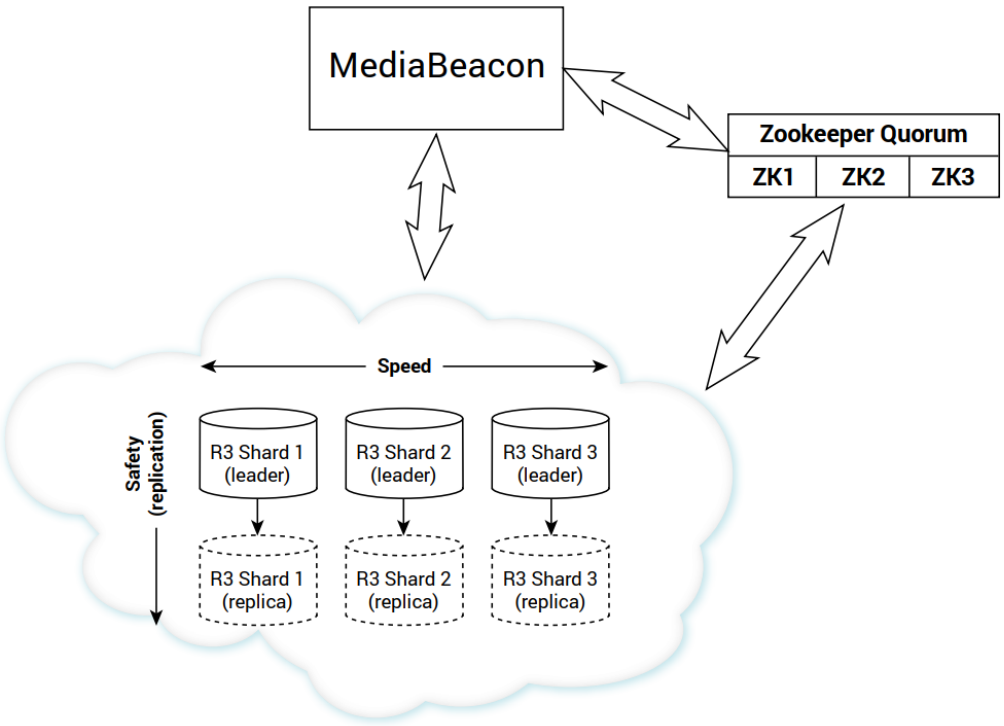
As a R3Search document index grows, so does the time spent responding to queries. One solution to this problem is to divide the index into smaller shards and host each of these on a separate R3Search node, forming a cluster. With a smaller index, response performance improves during queries. Adding documents to the collection is slightly slower because the cluster must first determine which shard stores the new document.

Another way to improve performance and availability is through replication, or mirroring of a node. If a cluster is configured with more nodes than shards, each shard will elect a leader to handle making copies of the index to each replica. Incoming queries are load balanced between the leader and all replicas, allowing yet another increase in speed.

Each node in the cluster must be configured with the same number of shards or the cluster will never reach a ready state.

To manage states during hardware failures and downtime, each cluster requires at least one Zookeeper to organize a cluster.

R3Search Cluster Configuration



In this example, the index is split between three shards. If any replica node fails the shard remains intact. If a leader fails, the replica becomes the leader and the shard remains intact. In both cases the shard becomes vulnerable because it is no longer replicated.

Redundancy in a Cluster

Fault tolerance can be achieved by adding additional Zookeepers, which work in a load balanced configuration where more than half of the Zookeepers must remain active after a fault. This makes having an odd number of Zookeepers the ideal configuration as even numbers do not add additional fault tolerance.

For example: With three Zookeepers you can lose one and maintain operation as you have more than half remaining; however, with four Zookeepers you can still only lose one and maintain a majority to have more than half operational. If the tolerance required is one server failure, four Zookeepers is no more tolerant than three. If two server failure tolerance is required, five Zookeepers is ideal and sixth adds no benefit.

Redundant R3Search shards create fault tolerance: In a redundant shard configuration, where data is duplicated across shards, all but one shard in a leader/replica relationship could fail and the indexes would still be available.

4.6. R3Search Clustering in Practice

4.6.1. Installation

In this example, we will configure a sample system with a core MediaBeacon server, 3 Zookeepers (which also run R3Search), and 3 R3Search servers. These steps can be adjusted to suit various system configurations, but the basic progression is the same:

1. Configure core MediaBeacon server.
2. Configure Zookeepers.
3. Configure standalone R3Search servers.
4. Launch core MediaBeacon server.
5. Launch Zookeepers.
6. Launch standalone R3Search servers.

Prior to installation, download the correct R3Search components to each server in the cluster.

Notes:

Zookeepers must run on port 31000.

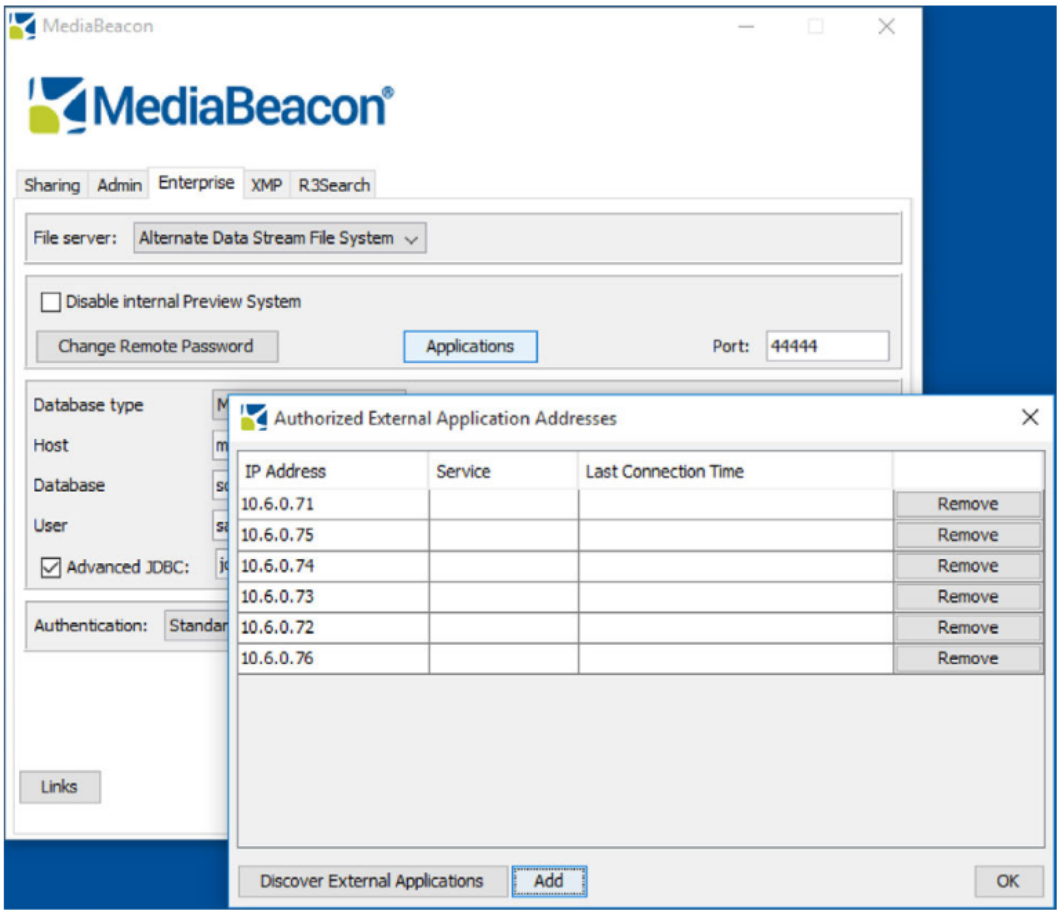
R3Searches must run on port 30000.

Zookeepers need to be able to communicate with each other and all R3Searches.

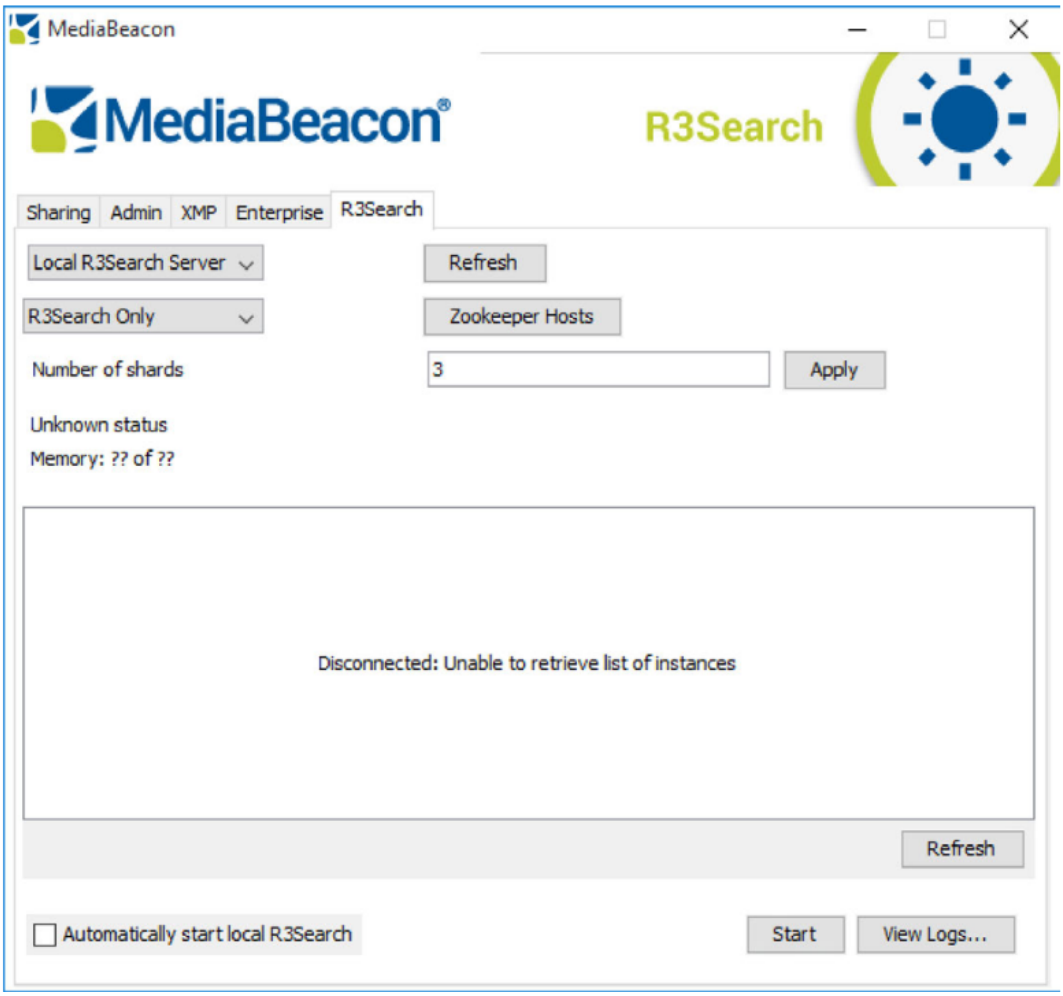
R3Searches need SQL access.

Core MediaBeacon Server

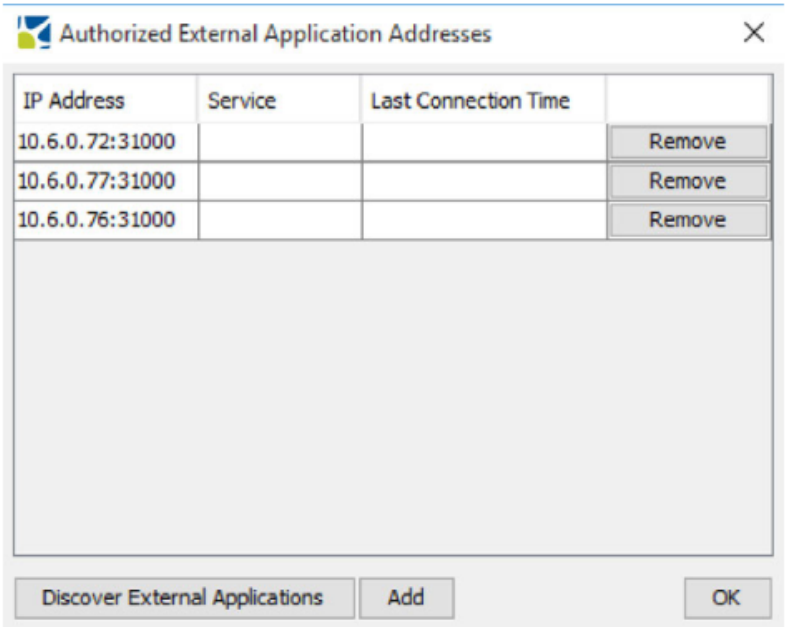
1. For the R3Search cluster to function, the IP addresses of all servers in the cluster must be white listed on the core MediaBeacon server. On the Enterprise tab, click **Applications** and click **Add**. Enter the IP addresses of all servers in the cluster, including the address of the core MediaBeacon server.



2. From the R3Search tab, set the following options:



a. Local R3Search server
b. R3Search Only
c. Number of shards: 3
d. Zookeeper Hosts: List the IP addresses of all Zookeepers for your system. Note: This is different than the white list from Step 1—only list the Zookeeper servers. All Zookeepers run on port 31000.



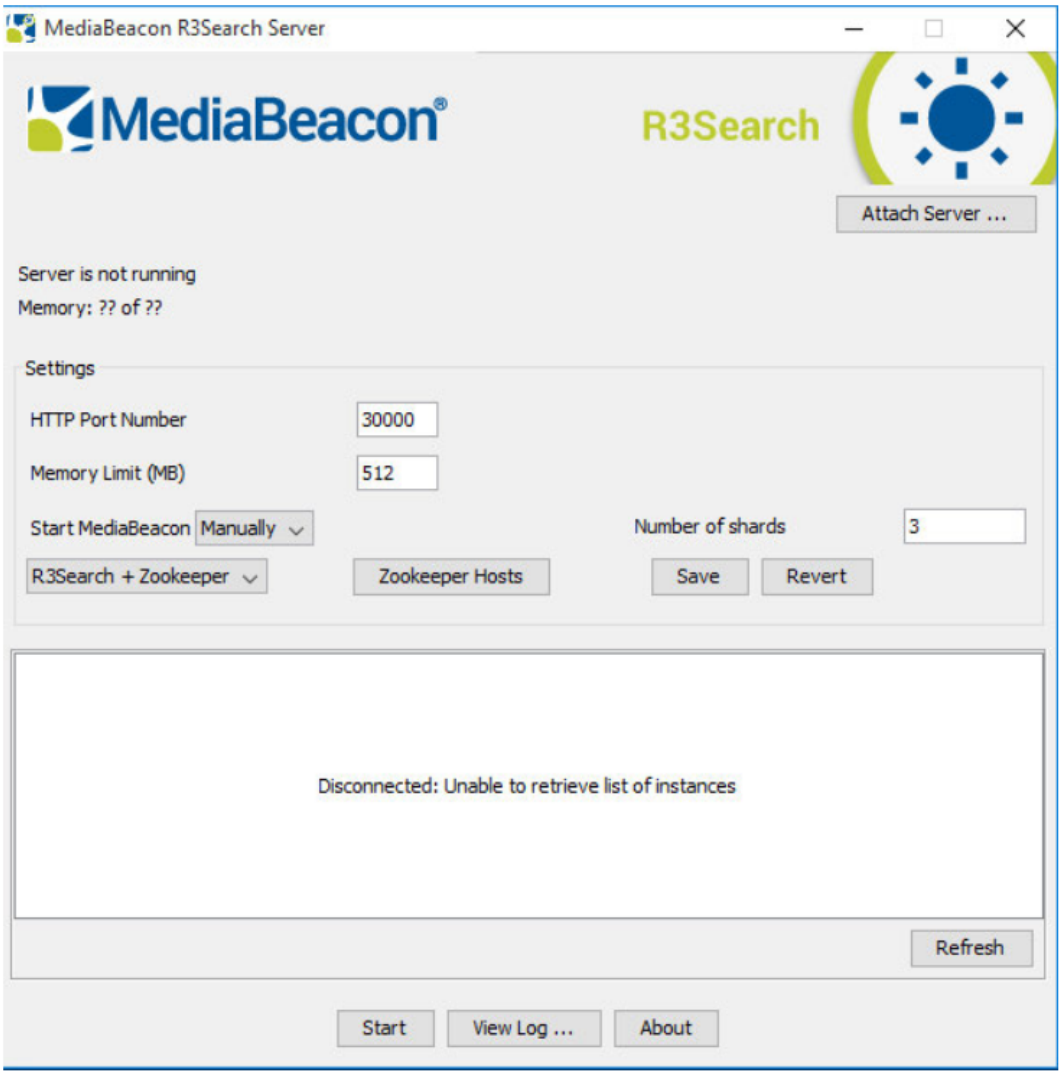
   e. Disable **Automatically start local R3Search**.
   f. Click **Apply**.
   g. Make sure R3Search isn't running.
3. Navigate to the Enterprise tab. If you haven't done so, set a remote password by clicking **Change Remote Password**.
4. Stop the core MediaBeacon server and shut down the application.
5. Delete the contents of the following folder (if it exists), which contains the R3Search cache

```
C:\Users\Administrator\AppData\Local\Solr
```

6. Do not restart the core MediaBeacon server until all R3Search servers have been configured.

Zookeeper Server

1. On the Zookeeper servers, set the following options:



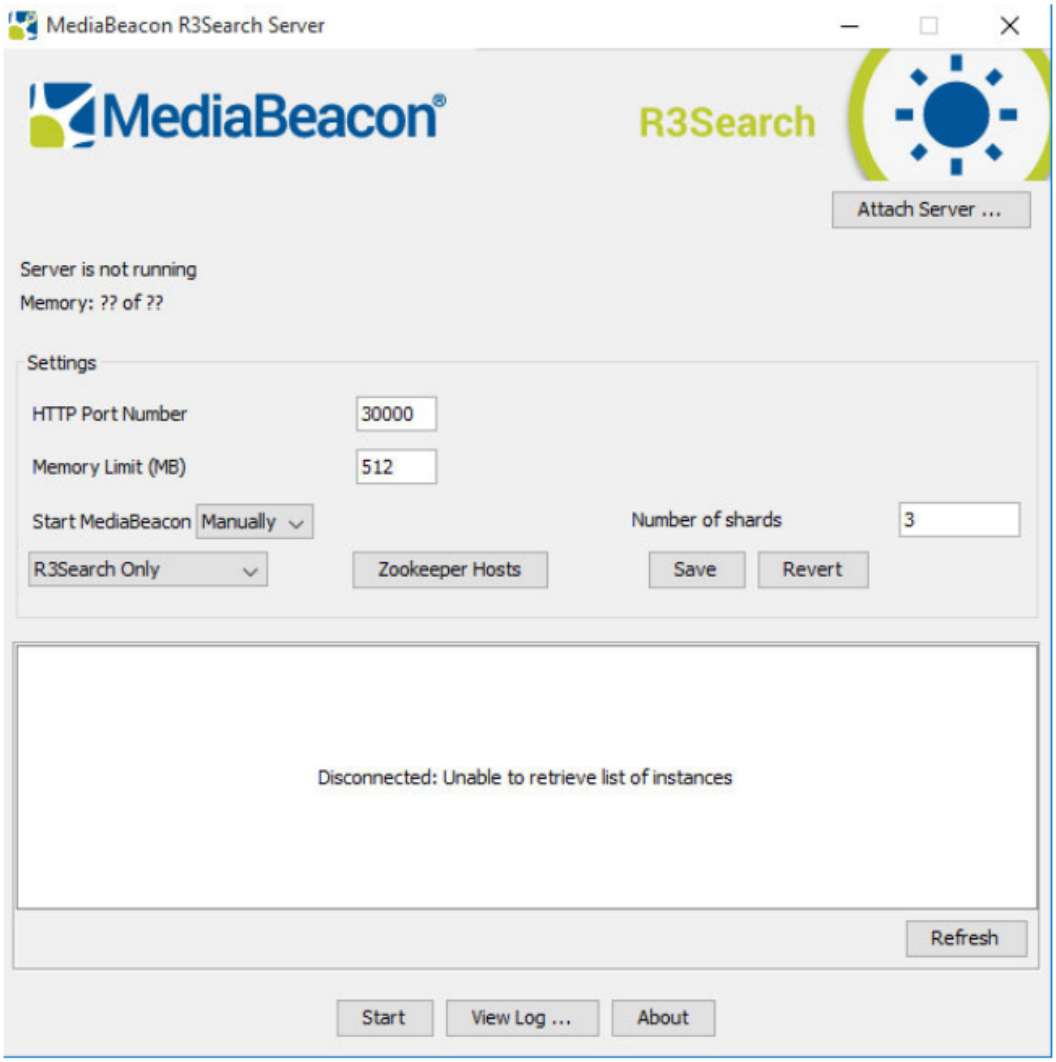
   a. HTTP port: 30000 (default)
   b. Memory limit: appropriate value for your system
   c. Number of shards: 3
   d. R3Search + Zookeeper
   e. Zookeeper Hosts: List the IP addresses of all Zookeepers for your system. Note: This is different than the white list on the core MediaBeacon server. Only list the Zookeeper servers.
2. Click **Save**
3. Stop R3Search (if running) and quit the application.
4. Delete the contents of the following folder (if it exists), which contains the R3Search cache:

```
C:\Users\Administrator\AppData\Local\Solr
```

5. Do not restart the core MediaBeacon server until all R3Search servers have been configured.

R3Search Server

1. On the R3Search servers, set the following options:



   a. HTTP port: 30000 (default)
   b. HTTP port: 30000 (default)
   c. Number of shards: 3
   d. R3Search Only
   e. Zookeeper Hosts: List the IP addresses of all Zookeepers for your system. Don't forget to include the port number. Note: This is different than the white list on the core MediaBeacon server. Only list the Zookeeper servers.
2. Click **Save**
3. Stop R3Search (if running) and quit the application.
4. Delete the contents of the following folder (if it exists), which contains the R3Search cache:

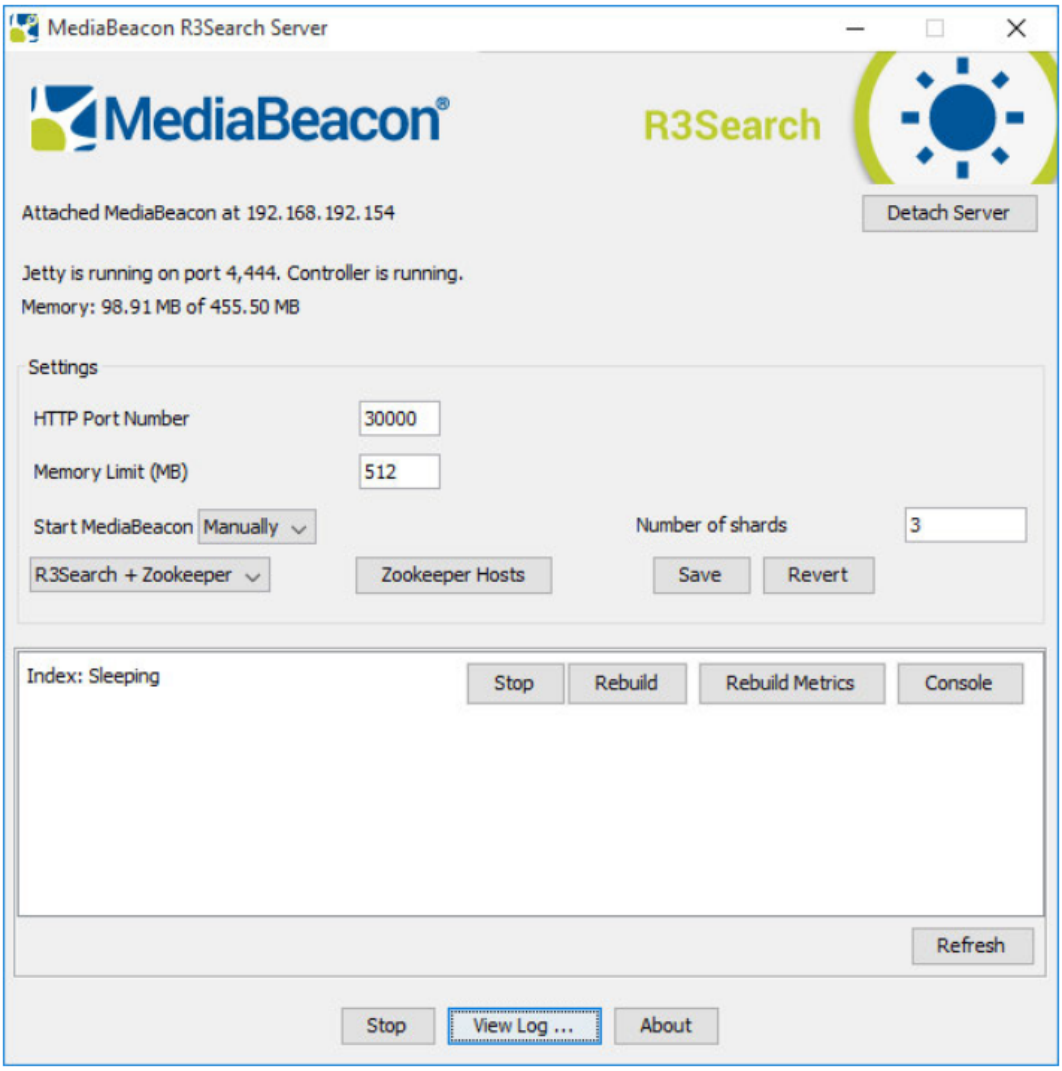
   ```
   C:\Users\Administrator\AppData\Local\Solr
   ```

5. Do not restart the core MediaBeacon server until all R3Search servers have been configured.

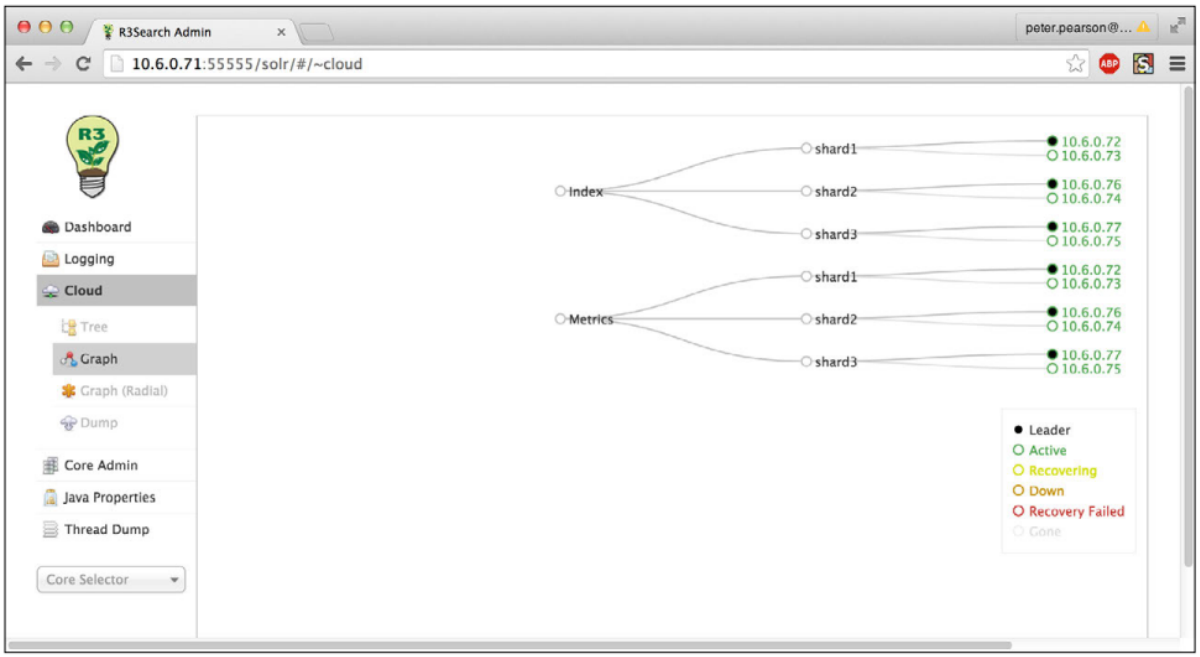
Starting up the Cluster

Once the configuration above is in place, start up the cluster by launching the following components in order:

1. Start the core MediaBeacon server.
2. On each Zookeeper server:
   a. Click "Attach" and select the core MediaBeacon server
   b. Enter the remote password.
   c. Click **Start**



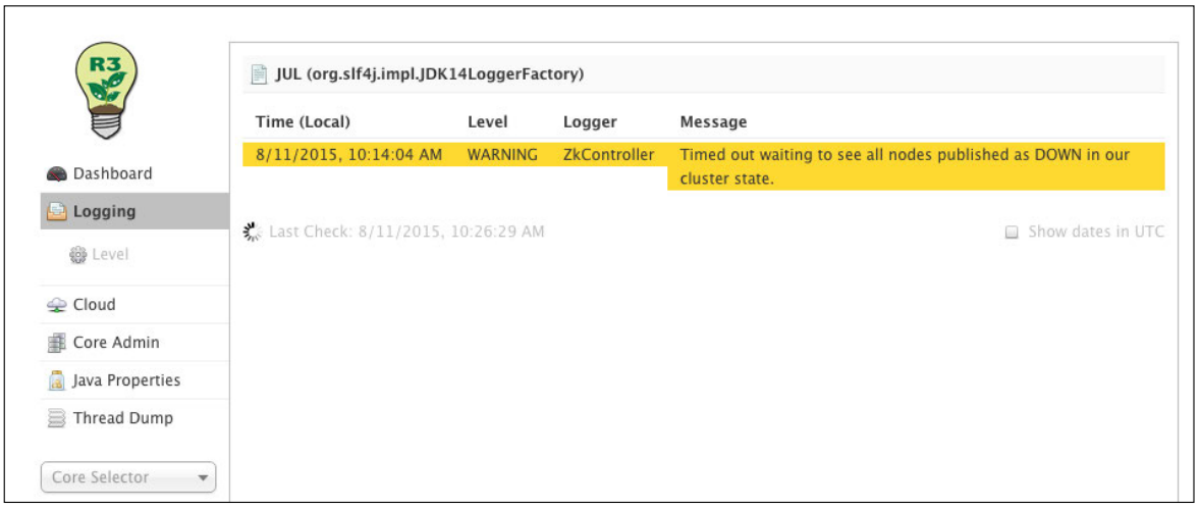
3. On each R3Search server:
   a. Click **Attach** and select the core MediaBeacon server.
   b. Enter the remote password.
   c. Click **Start**.
4. The R3Search cluster is now running. To see the status of the system, go to the MediaBeacon web interface and click **Admin > R3Search Administration**.



4.6.2. R3Search Administration: Troubleshooting

There are a few notable places in the Admin area that are especially useful to troubleshooting that we recommend investigating should any issues arise.

Logging



The Logging section is useful to see any warnings or issues that are detected.

Cloud>Graph

This section of the Dashboard shows how the servers are structured and the status of each. The status is indicated by a circle icon to the left of each component.

- **Leader:** Filled in green circle

  Things are running fine and all is well with the leader.
- **Active:** Empty green circle

  Indicates a slave. It's running just fine, and replicating the data its leader has.
- **Recovering:** Empty yellow circle

  The shard went down or had an issue and is now working to be functional again.
- **Down:** Empty orange circle

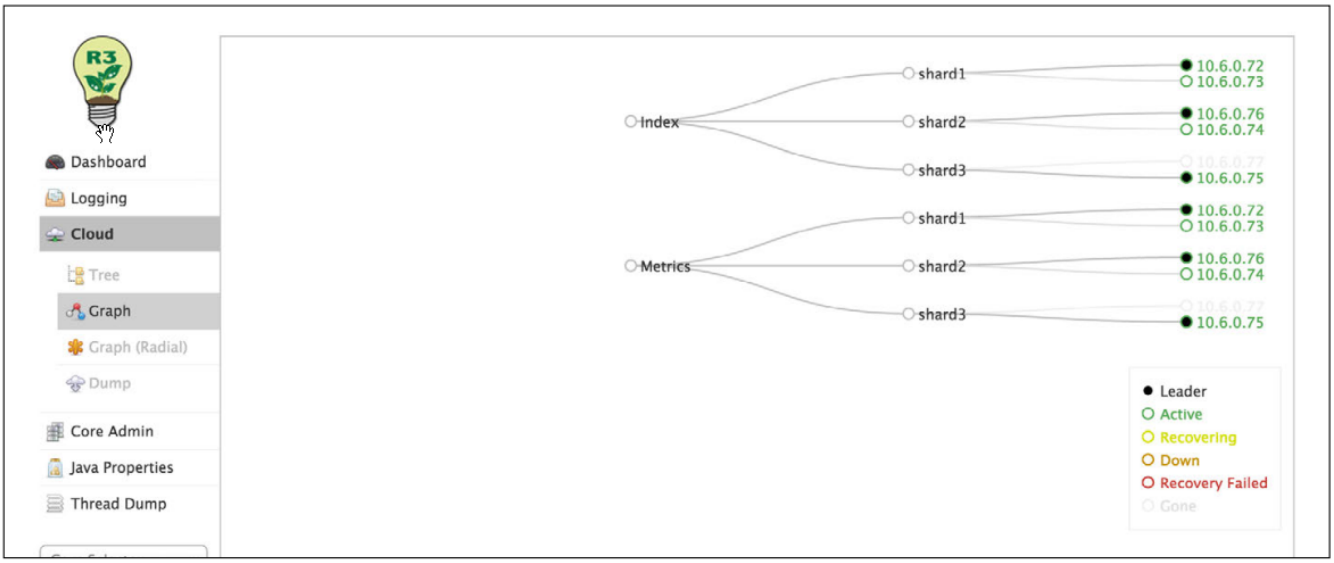
  The shard is not functional.
- **Recovery Failed:** Empty red circle

  The shard attempted to recover from an issue and failed. Human interjection is probably required to correct the issue.
- **Gone:** Empty gray circle

  The shard is not communicating with the cluster at all. The system does not know the shard's status.

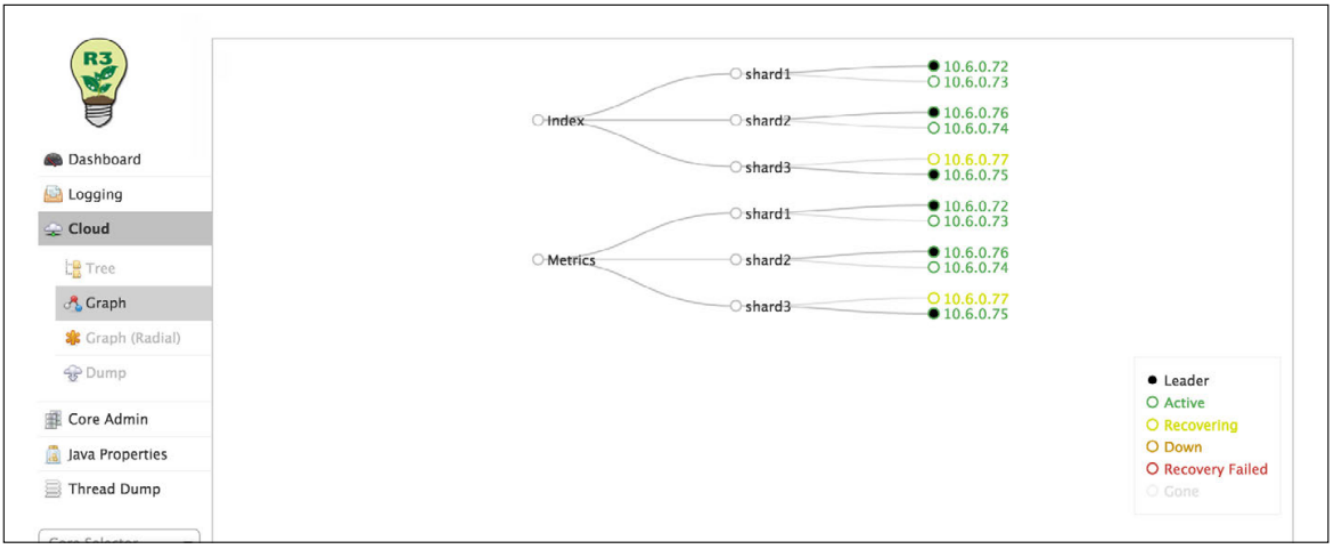
When a system encounters an outage, the status of the affected components is updated in the dashboard. Take a look at the following example to see what happens when we lose a shard leader, which is then restarted.

All shards were running and operating normally. Then, we suddenly lose one of the leader shards (10.6.0.77).



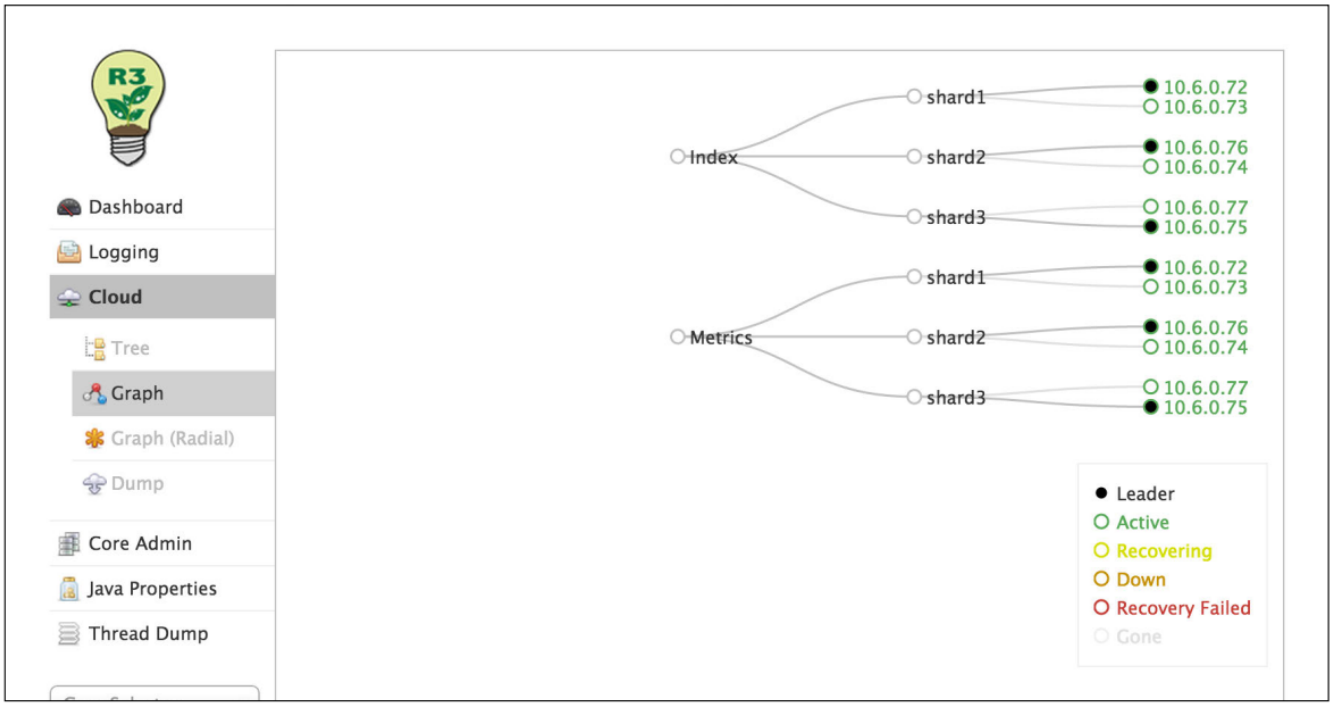
Notice the lost shards is indicated by an empty gray circle next to the IP of the server. The system intelligently responds to this loss by converting the slave shard of the leader into a leader. It's important to resolve the issue shortly because if the new leader were to encounter an issue, search functionality could potentially begin encountering issues.

We correct the issue and begin bringing the lost shard back up.



Notice the shard indicates it is recovering, indicated by the empty yellow circle next to it.

Once it is up, the shard that failed, which was once a leader, is now a slave of the new leader.



Cloud > Dump

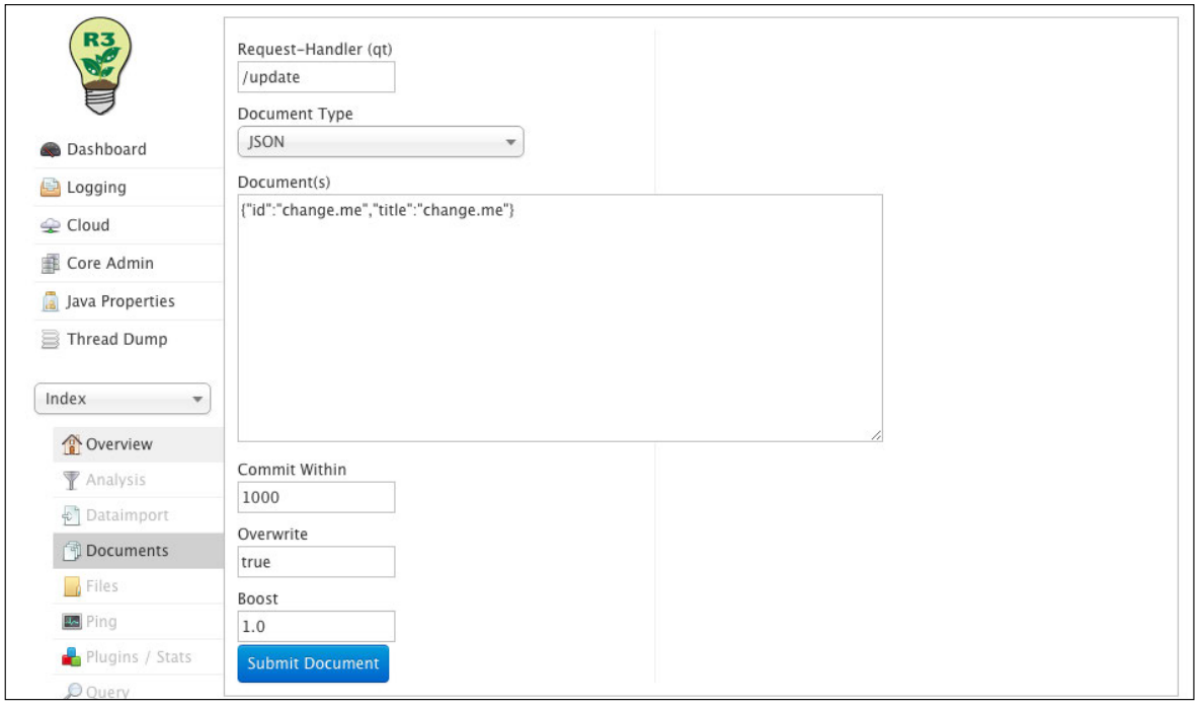
On rare occasions, the MediaBeacon team may request this data be provided if they are troubleshooting a reported issue.

Core Admin > Index Core

This section is useful to see the number of documents in a shard's R3Search index.

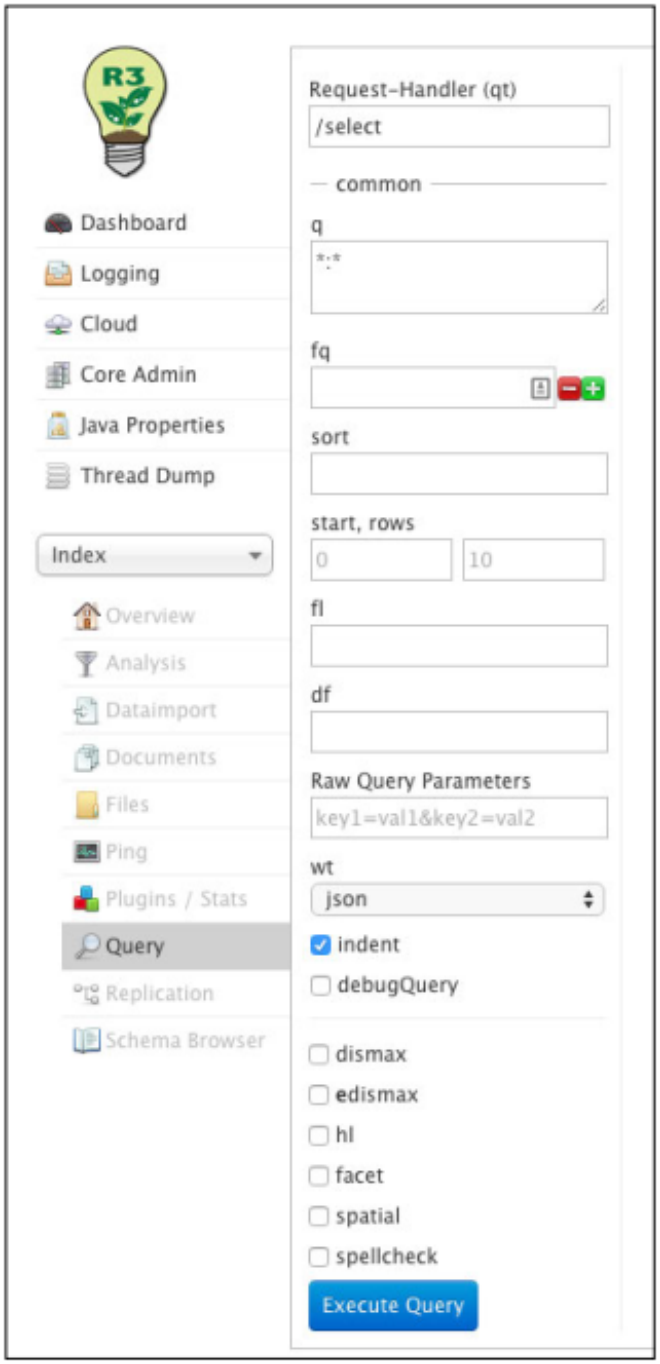
Core Admin > Index Core > Documents

In the t on the bottom left, select Index. Next, select Documents. Sometimes when troubleshooting, the MediaBeacon team will instruct you to use this area for manually issuing Solr updates.



Core Admin > Index Core > Query

This section is useful for issuing queries to the Solr index. The MediaBeacon team may instruct you to use this area when troubleshooting. An example query we can run here: id:29113.



4.7. Port Information

Below are the default ports used to connect.

R3Search

- Connects to MediaBeacon R3volution core: 44444, 44445, and 44446.
- Connects to R3Search node(s): 30000.

- Connects to Zookeeper(s): 31000.
- Connects to the database.

Zookeeper

- Connects to MediaBeacon R3volution core: 44444, 44445, and 44446.
- Connects to R3Search node(s): 30000.
- Connects to Zookeeper(s): 31000.
- Connects to the database.

4.8. Appendix

4.9. Running Standalone R3Search as a Service

MediaBeacon R3Search 7.0+ can be run as a service. The following are intended to intended to be basic setup instructions. Double-check each step to ensure its appropriateness for your particular configuration.

Windows Service Installation

1. Ensure MediaBeacon and R3Search are configured and running properly before proceeding with service installation steps.
2. Stop R3Search and exit the server application.
3. Open a command prompt and cd to the R3Search installation, which is typically C:\ Program Files \MediaBeacon\MediaBeacon R3Search.
4. Run the command `sc query R3Search` to determine if additional MediaBeacon services are installed on the system. If so, run the command `bin\prunsrv.exe // DS//R3Search` to uninstall them.
5. Edit etc\r3search_inst.bat to add the user that the service should run as.
   a. Modify the PR_SERVICEUSER and PR_SERVICEPASSWORD lines. The username should be prefixed with the domain and should match the user account name that R3Search was initially installed under. For the built-in domain, use `.\ username`. For additional information, see: https://commons.apache. org/proper/commons-daemon/procrun.html.
   b. Confirm that the line starting with `SET PR_JVM=` points to the correct jvm. dll on the system. The location of this file may change depending on the installed Java version and whether it's the JDK or JRE.
   c. Confirm that the various references to the R3Search binaries are accurate. The 'C:\Program Files\MediaBeacon\MediaBeacon R3Search' strings should be replaced with the actual install location if R3Search is installed to a non-default location.
   d. Update the PR_JVMMX variable to match the 'Memory Limit (MB)' set on the server side standalone R3Search application interface (which, in turn, should be set to a value appropriate to the server's use and resources). If you're unsure of a proper value for your environment, please contact MediaBeacon Support.
   e. Update the REM JVM configuration section and add the following two entries.

      REM Local IP Address

      -Dhost=10.22.116.210

      REM Zookeeper Host IP Address

-DzkHost=10.22.116.215:31000

6. In the terminal, run `etc\r3search_inst.bat` to install the service.
   - R3Search can now be started and stopped via the server GUI or the Windows Services GUI.