MediaRich®

VISUALIZER for SHAREPOINT

MediaRich Visualizer for SharePoint

6.2

Installation and Administration Guide

equilibrium®

Contents

Welcome to MediaRich Visualizer for SharePoint

Equilibrium® MediaRich® Visualizer for Microsoft® SharePoint® v5 uses the same engine as the full MediaRIch ECM product. Both provide users with media asset visualization, metadata ingestion and control, and deep inspection features. MediaRich Visualizer gives you a taste of the on-demand power of MediaRich. Upgrading to the full ECM product enables expanded capabilities:

- Generated thumbnails and previews of almost any size

  Visualizer is limited to thumbnails of a maximum 200 width and height ad previews of 400 width and height.

- Support for key Adobe file types, such as PhotoShop, Illustrator, and InDesign

- Exported image and video files to any format supported by MediaRich engine

  Visualizer exports images to the original format and JPEG and video files to the original format and MP4.

- Full control of batch processes including all file formats supported by the MediaRich engine

  Visualizer supports batch processing to Composite Logo, Save Image as JPEG, and Scale only and is limited to delivering to the BatchOut folder.

- Custom operations applied to images and videos upon export using the powerful MediaScript™, which provides automation of almost limitless output options

  Visualizer supports Convert to Grayscale, Draw 3-pixel black border, and Flip Horizontally on still images and no operations on video.

To upgrade to the full version of MediaRich ECM for SharePoint, call Equilibrium at (415) 322-4343, or go to http://equilibrium.com/visualizer/ecmupgrade/.

Chapter summary

Workgroup Content Collaboration in MediaRich ECM

MediaRich ECM enables businesses to manage digital media assets within the SharePoint environment. The improved collaboration enabled by SharePoint/SharePoint Foundation 2013 and 2016 provides many company-wide benefits:

- Transforms SharePoint into a more visual environment, like Windows 8/10, Mac OS X, or iOS.
- Eliminates the "hunt for files"—finding files is faster and easier with dynamic visualization of 450+ file types available everywhere
- Delivers a lightweight file that can be viewed on lower-bandwidth connections, regardless of the size of the original file
- Expands all search capabilities to include image, audio and video, thumbnail previews, and multi-page UniZoom
- Dramatically reduces the time to review and approve file review requests via the "view anywhere" cross-browser and device support
- Provides faster time to market for assets by creating efficient collaborative workspaces
- Establishes approval workflows to streamline production and delivery of media assets
- Provides access to digital content in real time within a familiar user interface
- Increases user productivity with powerful search tools including content-specific queries
- Aggregates media from vendors and syndicate content to channel partners

MediaRich ECM enables business users to manage a single IT platform for all corporate media assets, providing dramatic reduction in corporate content production costs. This provides enterprise organizations with many advantages:

- Reduction of IT support costs by providing a single content platform for multi-channel marketing needs
- Reduction of the total cost of ownership (TCO) of IT systems by managing media assets from within the SharePoint server
- Reduction of high cost asset production and media storage by enabling on-demand preparation of content, instead of preprocessing
- Removal of the added cost for training, maintenance, and support of a third-party system for digital asset management
- Global brand management from within a single IT platform

Equilibrium MediaRich technology extends SharePoint 2013 and 2016 and enables firms to manage all corporate brand assets in a secure environment. Businesses can protect brand asset integrity while providing an environment for both partners and internal users to access and use brand assets within corporate guidelines.

Image, Audio, and Video Production Workflows and Best Practices

Adoption of DAM systems promotes communication and strengthens business relations. This is particularly true of the Equilibrium MediaRich Visualizer for SharePoint solution because the same workflow and processes that an organization uses to manage their business documents can be applied to their media assets—ensuring successful adoption by all information workers within an organization. Also, because there are many different platforms used within an organization now, the MediaRich Visualizer "view everywhere" capability provides the ability to find, view, and approve on-the-go from Windows7/8 phones, iOS devices (including iPhones and iPads), Android devices, and just about any browser.

Digital Asset Management should not be a specialized solution entirely separate from the rest of a business' platform for sharing and collaborating on document production. MediaRich Visualizer allows information professionals to break down the traditional walls between the creative team and the business users, allowing them all to work with a single, familiar interface, that is now pervasive because the visualization can be turned on anywhere with the revolutionary InstantOn™ capability.

This type of DAM system greatly increases your efficiency because it allows you to find already existing assets quickly—eliminating the need to reproduce or re-license an image or video because you could not find the original. The system can also be used to automate asset production workflows, helping to keep track of the work process and allowing users to seamlessly forward the assets to the next person in the processing phase.

Sharing assets with customers and suppliers improves cooperation and enables you to increase business or even enter new business fields, such as e-commerce. A DAM system also supports cooperation and communication within your organization, because different departments as well as customers are able to track a job's progress as it flows through the system.

A digital asset management solution enables enterprises to implement a set of common best practices:

- Synchronizing brand messages and product delivery across global markets
- Customizing brand messages and products for channels, localized markets, and customer groups
- Measuring the results and correlation between branding expenses and revenue
- Controlling access to the high-valued rich media files of the enterprise

Automating Corporate Branding

Clear, memorable branding can create significant business advantage. But to modify and distribute digital assets, enterprises need a sophisticated collaboration infrastructure that fosters creativity while protecting the integrity of image assets.

Equilibrium MediaRich Visualizer integrates a leading-edge image server with Microsoft SharePoint 2013/2016 and SharePoint Foundation, the collaboration foundation for Microsoft technologies. With MediaRich, organizations can control high-quality assets, create derivatives on-demand, and deliver consistent branding materials for Web, print, wireless, and Microsoft applications.

The solution increases business productivity and reduces creative department costs by enabling knowledge workers to easily manage, modify, and deploy visual content in a secure, self-service portal.

MediaRich automates the production and deployment of content to Web, wireless, print, and standard office applications. It enables organizations to create images and graphics for use across all media, delivering accurate, personalized images while reducing image production and storage expenditure.

MediaRich Visualizer Features

MediaRich Visualizer offers unparalleled innovations, such as InstantOn Everywhere, which allows users to enable advanced image-management service on nearly any existing SharePoint document library. MediaRich Visualizer is also localization-ready—now multi-national organizations can offer MediaRich's enhanced experience in English, Dutch, French, German, and Arabic.

Combining the power of the MediaRich Server with content management, you can ensure that the most current, approved brand asset is being used by taking advantage of SharePoint's routing and approval process, version control, and check-in/check-out system. These workflows, combined with the new UniZoom AEC and HTML5 auto-conformance interfaces, provides the widest audience possible with a trouble free review and approval experience. Furthermore, your organization can create customized SharePoint workflows to integrate with other business information systems.

	ECM for SharePoint	**Visualizer for SharePoint**
InstantOn™ Everywhere in SharePoint	Yes	Yes Thumbnails limited to 200x200
InstantOn™ Upgraded Search	Yes	Yes
UniZoom™	Yes	Yes
UniZoom AEC™	Yes	Yes
Image File Format Support	Over 450 file types	Does not support Adobe Illustrator, Photoshop and InDesign file types
Universal Video Import and Playback	Yes	Yes
Zip and Download Capability	Yes	Yes
Enhanced Metadata Support	Yes	Yes
Image Self-Service Export	Full file transformation and scripting of operations using MediaScript™	Limited to JPEG output and three basic operations

	ECM for SharePoint	Visualizer for SharePoint
Video Self-Service Export	Full file transcoding and scripting of operations using MediaScript™	Limited to single MP4 output
Enhanced Metadata Support	Yes	Yes

InstantOn™ Everywhere in SharePoint

InstantOn enables any Classic Document Library or Asset Library to have all the power of MediaRich's features with a click of a button. By enabling this feature, there is no need to load assets into a new library. Instantly, you will see thumbnails in the existing location of these files and you will see the new EQ Toolbar on every thumbnail and video in the library. By applying InstantOn, users can now have the power to view, watch, and hear files in any library and search in a scalable environment that minimizes the SharePoint resources required by automatically managing all the visual assets within MediaRich CORE. Additionally, the EQ Toolbar provides one-click export, add-to MediaCart™, and go to MediaCart, from anywhere that visuals reside. There are NO client/browser plug-ins required.

InstantOn™ Upgraded Search

Enable users to View, Watch, and Hear Files "In-Place"

Search directly from Basic, Advanced, or Enterprise (FAST) Search within any version of SharePoint 2013/2016 or SharePoint foundation. Regardless of the original file format, users can view a thumbnail preview or multi-page zoom for detailed inspection for any supported file type where InstantOn is applied. All users of SharePoint can stop the "hunt and peck" method of locating files and easily see, watch, and hear everything they need to BEFORE they download the file. Also, it's possible to then multi-select files for zip and download, or batch process their selections to save even more time and prepare content for easy delivery.

UniZoom™

Deep Inspection and annotation in an all-browser, multi-device, universal multi-page experience

View Anywhere™

Equilibrium's goal for MediaRich ECM is to enable a "view anywhere" experience. MediaRich ECM provides all-browser, multi-device, universal multi-page zoom and pan technology. Now you can view all of our supported file types, deeply inspect any file, without having to download the entire file, and move around the page within a browser pop-up or any device. Multi-page file types are automatically detected, and the system shows the multi-page interface when more than one page exists.

You can preview individual pages of Word® and Excel® documents or full PowerPoint® presentations to guarantee you find the exact asset you are looking for. This helps to reduce time and bandwidth with unnecessary downloads and enables information workers easy access for quick approval. There

are many additional document and complex file visualization formats supported including: UOS, UOP, WK1/2, WMF, 123, STO, STW, SGF, and SDW.

Regardless of the size of the original file, the UniZoom™ viewer delivers a lightweight file that can be viewed on lower-bandwidth connections.

Annotate Anywhere™

Instead of embedding annotations or redacting content in a PDF, ECM provides a patented universal viewing experience with Automatic Experience Management™, along with a simple annotation and redaction editor with commenting that enables a non-destructive layer of feedback. This feature set also provides the ability to generate an annotated and/or redacted PDF file from virtually any supported file type to enable the quick generation of a "change list" for work groups or a secured document for public distribution. You also can select different users that you want to toggle on-off to provide focused viewing of feedback as you talk through changes remotely, etc.

This capability provides far superior file security by eliminating any requirement to give download access to users as well as obscuring sensitive information. With UniZoom annotation features, you can avoid attachments or file pre-processing , and replace the required check-out/check-in step to provide feedback on any file type supported by the ECM Library. This provides a single-source-of-truth and eliminates the confusion around which file should be updated.

UniZoom AEC™

Dynamic PDF viewing from anywhere

The new UniZoom AEC™ dynamically updates access to all your PDFs with relative linking, without having to physically download the files. This powerful feature offers quick and painless viewing of your PDFs across multiple devices with "read-only" capability over as little as a 4G network. With this new feature, you have the ability to open 300+ MB PDFs that could not be downloaded or viewed before.

Image File Format Support

MediaRich OneViewer goes well beyond the standard SharePoint picture library to provide previews of CMYK images, vector images,along with related imports and exports of all popular file formats for Web, print, Mobile and wireless use. This includes BMP, WBMP, GIF, JPG, PNG, PCT, TIFF, PDF, TGA, CGM, DIF, DXF, DNG, Raw Camera (over 250 raw camera types supported), JPEG 2000, and many others.

For a full format support list that is accurate at the time of publication, see . For a regularly updated file format list, please visit our Supported Formats page on the Equilibrium web site: http://equilibrium.com/equilibriumnew/supported-formats/

Universal Video Import and Playback

With View Everywhere HTML5/Flash Player

Import videos from a variety of file types including MP4, AAC, MP(E)G, MP(E)G2, M2T, MXF, MPEG4, RM, FLV, WMV, AVI, MOV, M4V, TS, and Audio files including AAC, WMA, WAV, OGG, MP3, AIF, and AIFF.

> *Note:* Visualizer exports video files to the original format and MP4. See "MediaRich Visualizer Features" on page 8 for a comparison of Visualizer and the full MediaRich ECM for SharePoint product.

For a full format support list that is accurate at the time of publication, see "MediaRich Audio and Video File Formats Natively Supported" on page 116. For a regularly updated format list, please visit our Supported Formats page on the Equilibrium Web site: http://equilibrium.com/mediarichserver/features/#mr-filetypes

HTML5 optimized device and bandwidth detection capability (must be configured by the SharePoint site administrators) enables support for all major smart devices to have video playback, including Windows 7/8 phones, iOS iPhones, iPads, iPods, and Android OS devices.

Powered by the MediaRich patented auto-conformance technology, MediaRich's Video Playback liberates end users from plug-ins and complex preparation requirements. Video residing in a SharePoint document library can be viewed in nearly any modern device (laptop, tablet, smart phone, and so on), regardless of the operating system or browser used.

Zip and Download Capability

Whether you are in a standard Document Library list view, or whether you are in an Asset Library, you can multi-select and select the Zip and Download function found in the ribbon at the top of the page. A single click pulls the original files, zips them, and delivers them all in one package. This function is available from any Search results, Asset Library, or Document Library.

Enhanced Metadata Support

Ingest Metadata automatically when images are uploaded into the system. View image properties, IPTC (Image) and EXIF (Camera RAW), XMP/XMP2 (Adobe and other file types) industry standard information. With the new MediaRich Document content type, all the metadata fields are extracted and mapped into a standard list of fields. This metadata is automatically indexed, enabling powerful search results without any additional data entry. Information workers can update these fields, store the information in SharePoint, and write it back to the original files for future use.

Image and Video Self-Service Export

The full MediaRich ECM for SharePoint product provides comprehensive image editing for image creation, modification, and delivery. Transform your images on-the-fly using corporate publishing guidelines or provide users the flexibility to select the file format, size, and resolution before

downloading. Export segments of audio/video, apply custom processing MediaScripts™, automatically transcode from any format to any other format. Auto-assembly customization is available via Equilibrium to dynamically add pre-post rolls to videos, among other automatic video processing tasks, such as bugging, or compositing of logos, etc.

> *Note:* Visualizer supports Convert to Grayscale, Draw 3-pixel black border, and Flip Horizontally on still images. Visualizer support for video export is limited to the Transcode Video operation with Video_mp4_wifi_20ch as the only output type, and no batch operations through the MediaCart. See "MediaRich Visualizer Features" on page 8 for a comparison of Visualizer and the full MediaRich ECM for SharePoint product.

MediaBatch™ Uploading with MetaBatch™ Processor

The Universal MediaBatch™ Uploader provides an alternative to the single file uploader found in Document and Asset Libraries. It also works in nearly all browser for Windows, OS X, and Linux to provide interoperability with other environments.

The MediaBatch Uploader provides a hierarchical way to upload entire folder and sub-folder lists of files automatically. It expands the limits of the Internet Explorer uploader from 2 GB per upload (total) to 2 GB per file. Additionally, metadata post-processing stage enables automatic tagging of project files, appending or replacing values for all of the changeable fields that we extract. Also, you can now create custom metadata sets which will be presented for batch modification.

> *Note:* Depending on authentication method (MediaRich Visualizer supports NTLM, NTLM2, SSL, and Forms Based), you might need to re-authenticate to enable upload.

The MetaBatch™ Processor is implemented as a series of improvements to the Metadata Enhancement Phase that executes after using the MediaBatch Uploader. Users access the MetaBatch Processor by using the MediaBatch Uploader or directly from its own Ribbon button. It provides the ability to edit the values of standard SharePoint metadata fields and Term Store Managed Metadata fields.

Integration with SharePoint

MediaRich Visualizer is comprised of two primary server technologies from Equilibrium that integrate to provide state-of-the art image management and delivery capabilities for SharePoint 2013 and 2016. The first is the MediaRich CORE Server ("MediaRich CORE"), which powers the high-end digital asset management features, such as image transformation, rich thumbnails, and video playback.

The second is MediaRich for SharePoint Connector ("The Connector") which integrates MediaRich CORE directly with SharePoint 2013 and 2016.

Enterprise scalability

MediaRich Visualizer is fully compatible with a SharePoint BLOB storage configuration. SharePoint external BLOB storage capabilities, coupled with state-of-the-art MediaRich technology can allow your organization to create an enterprise-class digital assessment system or simply make all your files simple to find from anywhere, while leveraging your SharePoint investment.

InstantOn Enabled Libraries

With activation of MediaRich Visualizer's InstantOn capabilities, all MediaRich features (including rich thumbnailing, image transformation, video auto-preview preparation, enhanced metadata, and more) are enabled, within seconds, on nearly any existing SharePoint document library. Additionally, users can easily add content to the MediaCart and access one-click export in the EQ Toolbar. This also provides many advantages for customization—you can customize the Asset Library or Document Library as always in SharePoint, but get the benefit of all the MediaRich features without the requirement of the custom MediaRich Image Workspace.

Easy Asset Viewing, Processing, and Export

You can instantly export an asset right from the asset's thumbnail. MediaRich Visualizer overlay and roll-over controls provide quick and easy access to many functions:

- Export launches a step-through export process for any asset to create a specified rendition. This supports custom outputs, such as a logo rendered out of a PDF or document, or a transcoded HD video to an iPhone compatible download.
- The one-click Add to MediaCart function provides easy access to the MediaCart from anywhere. It also includes a one-click Remove from MediaCart and Go to MediaCart.
- For an Asset Library, the View Properties Option displays the large thumbnail and other Asset Library options.
- A thumbnail click activates the patented UniZoom technology. This enables high quality and full screen dynamic visualization of any file, in any browser, and automatically displays in full-screen mode on all smart devices. If the file is a video, there are two options for video display.

HTML5 Video Playback and Mobile-Device Compliance

One of the challenges in the delivery of digital video is the constant proliferation of new browsers, operating systems, and devices (such as laptops, smart phones, and tablets). Optimizing video for these devices is time consuming to video producers and site developers.

With the Auto-Conformance technology provided by MediaRich Visualizer, organizations can automatically deliver device-compliant video derivatives (such as IE with Flash, iPads, and Android phones) from a single video source, all within a SharePoint library. If your organization delivers a large quantity of digital video, the HTML5 Video Playback can potentially save hundreds, perhaps thousands, of hours of conversion and development time.

Supported Browsers

In order for the Auto-Conformance technology to work, users must have one of the following browsers:

- IE 11 or later
- Chrome
- Safari
- Firefox

Localization Support

MediaRich Visualizer that supports multiple languages. MediaRich for SharePoint now offers French, German, Dutch, and English localized language options.

Procedures and system requirements for activation of language editions are addressed in the *MediaRich CORE Installation and Administration Guide*. Consult with your SharePoint Farm Administrators about activating localization features. When activated, this provides each user the opportunity to set their own language preference, and the entire product displays in the chosen language along with its SharePoint surrounding interface.

MediaRich Visualizer for SharePoint Architecture

MediaRich ECM for SharePoint is proof that sophisticated applications can be leveraged inside of a company's SharePoint deployment. Because it is seamlessly integrated with SharePoint, MediaRich enhances SharePoint deployment without requiring modifications to the deployment.

The MediaRich CORE Server can be integrated into any stand-alone or web application through Microsoft .NET Web service and the MediaRich COM Application Programming Interface (API). MediaRich URL-based methodology, Microsoft .NET Web service and COM application programming interface (API) enable seamless and straightforward integration with application servers, asset management systems, CMS, content delivery networks, databases, and standalone applications. This includes a MediaGen WebService client that creates and executes requests, providing the framework for building transaction-based services for various media types, data interaction, and extraction of data from heterogeneous production environments.

The focus of this document is the installation of the MediaRich ECM for SharePoint Connector software, the configurations performed by administrators for the SharePoint farm, and the related configuration for the MediaRich CORE servers to support the user community. For a detailed description of the available features and usage instructions, refer to the *MediaRich ECM for SharePoint User Guide*.

Chapter summary

MediaRich ECM for SharePoint Version 6

MediaRich ECM for SharePoint is comprised of two components that provide enterprise-class digital media services to SharePoint:

- The MediaRich CORE Server (also known as *MediaRich CORE* or *CORE*) that provides Equilibrium's advanced image transformation and delivery technology.

- The MediaRich ECM for SharePoint Connector (also known as "SharePoint Connector" or "Connector") that allows your organization to enable a SharePoint 2013 or SharePoint 2016 farm to be integrated with MediaRich image server. Within minutes after the solution is deployed, users will be able to take advantage of advanced image-visualization technology.

  The Connector will be deployed to your SharePoint 2013/2016 farm; it is strongly recommended that the MediaRich CORE Server be installed on a dedicated server and not on your SharePoint Web Front End Server farm.

> *Note:* It is possible to install both MediaRich CORE and SharePoint Connector on a single machine, but this is not in accordance with best practices—it can cause performance issues depending on the size of your configuration. Also, some modules, like the HTTP API and .Net Web Services API, will not work while SharePoint is running if both MediaRich CORE and the SharePoint Connector are on the same server.

When the SharePoint Connector is installed, SharePoint communicates with one or more MediaRich CORE servers over the network to provide advanced on-the-fly image and video preview functionality along with on-demand content processing. Increased media-processing capacity can be easily added by installing additional MediaRich CORE Servers.

About SharePoint 2013/2016

SharePoint comprises a multipurpose set of web technologies backed by a common technical infrastructure. These web tools are designed to support non-technical users and provide intranet portals, document and file management, collaboration, websites, enterprise search, and business intelligence. It also has system integration, process integration, and workflow automation capabilities.

Benefits of SharePoint

SharePoint 2013/2016 allows organizations to easily create and deliver content in an array formats (including documents, discussion threads, wikis, and so on). Furthermore, SharePoint provides content owners and administrators to manage security on entire sites, at very granular levels. SharePoint is designed for easy and flexible deployment, administration, and application development.

The benefits of using SharePoint include the following:

Benefit	Description
Microsoft Office integration	Deep integration with Microsoft 0ffice programs allows teams to collaborate using the familiar tools (Word, Excel...) they use every day.
Document collaboration	Document workspace sites created using Microsoft Word take advantage of platform features by providing a document collaboration space for contributors or read-only users.
Check-in and check-out	Documents are locked by authorized users to prevent changes by others.
Document versions	Document changes are tracked and assigned sequential version numbers for auditing and rollback.
Browser-based customization	Changes can be made in a Web browser by dragging Web Parts onto personal or public pages, and then customizing them. Themes can also be applied using a browser to change a site's look and feel.
Presence integration	Users can determine the Online status of site members quickly by sending email or an instant message, adding the member to a contact list, and viewing current free/busy status.
Content Status Alerts	A user or site manager can add an alert to a list or list item so that the users can receive an email notification when changes are made, or new contents is added.

SharePoint Web Parts

SharePoint site pages can be easily customized with Web Parts, a Windows ASP.NET-based technology. Web Parts are reusable "widgets" that can be added (by drag and drop) to a SharePoint to create or aggregate content, as well as enhance page functionality. SharePoint 2013/2016 is equipped with dozens of web parts that can reused on any page.

Installation of the MediaRich ECM for SharePoint Connector will provision additional web parts that can be used to extend a site's rich media management capabilities. Also, custom web parts can be created (by ASP .Net developers), to suit your organization's specific requirements.

SharePoint Web Applications

Within this document and in the context of SharePoint, the term "web application" refers to one of the following:

- A container that manages administrative settings, such as profiling or search-crawl rules. These Web applications are *service applications*.
- A top-level entry point for users to view and manage content for Web sites and portals. Web applications contain one or more SharePoint site collections. These applications are known as *content applications*.

Service applications allow for the configuration several areas. Most notably, these applications can govern security and authentication (HTTP or HTTPS, for example) policy.

SharePoint content applications provide the means of managing your site's content structure, giving you control over settings for groups of sites. The following are among the configurations you can perform at the web application level:

- Configure authentication policy, which determines whether users can access the site content through HTTP or HTTPS
- Set security policy, which allows for a role-based definition of access to SharePoint content.
- Designate which IIS "application pool" governs the web application
- Specify allowable content formats (or "mime types) that are allowed (or forbidden) to be uploaded to your web application. For example, your organization might choose to restrict uploads of a particular file type (such as .rar, or .exe).

Single Server vs. Server Farm Deployments

SharePoint 2013/2016 can be deployed on a single server (along with IIS, and SQL server) or as part of a server farm in which services are distributed among multiple servers. If you anticipate only light usage of your Web sites, you can use the stand-alone server architecture. Keep in mind that your typical SharePoint usage is likely to increase when you enable the advanced MediaRich image-processing capabilities. If you are supporting sites in a large organization or are an Internet Service Provider (ISP), and anticipate heavy usage and a high level of data traffic, the server farm architecture is strongly recommended.

In both configurations, each application has its own set of content databases in the SQL Server. The configuration database directs each server or application to the appropriate content database for a given site. The content for sites within a site collection is stored in a single content database. More about the attributes of single-server and server-farm architectures is contained in the following sections.

Stand-Alone SharePoint Server Configuration

A stand-alone server configuration has the following characteristics:

- A single server running SharePoint 2013/2016, SQL Server, and IIS
- Web applications for services (such as search and profiling) '
- Web applications for content
- Scaling is achieved by adding site collections to an existing content Web application, or by adding subsites to an existing site collection.

SharePoint Server Farm Configuration

A server farm configuration has the following characteristics:

- Two or more servers each running one or more of the following: SharePoint, SQL Server, and IIS
- Web applications for services (such as search and profiling)
- Web applications for content

- Performance and capacity, which are increased by adding additional servers running SharePoint Services and SQL Server
- Scaling, which is achieved by adding more Web Front End Servers (to increase throughput for the existing content) and top-level sites and subsites (to support more content).
- Load balancing, which is achieved by using switching and routing hardware or software such as Windows Network Load Balancing Service

SharePoint Capacity and Scale Limits

In many cases, the scalability in SharePoint 2013/2016 is not restricted by specific limits enforced by the system, but Microsoft has best-practice suggestions for reasonable performance. Microsoft refers to *thresholds*, which are configurable limitations that can be exceeded to accommodate business requirements, and to *supported limits*, which means that the values are configurable. However, defaults are set according to tested values.

You can choose to exceed these suggested values, but might find the performance to be unacceptable. Additionally, there are some areas (called *boundaries*) that are restricted by design and cannot be configured.

Refer to the Software Boundaries and Limits Section article on Microsoft's TechNet site for a detailed overview of objects in SharePoint and their practical limits:

- SP 2013 — https://docs.microsoft.com/en-us/SharePoint/install/software-boundaries-and-limits
- SP 2016 — https://docs.microsoft.com/en-us/sharepoint/install/software-boundaries-and-limits-0

Remote BLOB Storage and MediaRich ECM Compatibility

Traditionally, SharePoint stores all content in the database. This does lead to performance degradation when content databases become very large and requires a substantial amount of time to split files into BLOBs and re-assemble them as needed. SharePoint 2013/2016 is the first edition that allows organizations the option to store large files—binary large objects or *BLOBs*—on the file system. In this architecture SharePoint needs to manage only lightweight pointers to the file locations, reducing the risk of database-performance degradation is greatly reduced.

If your organization has a high volume of digital assets, or manages particularly large files, the external BLOB architecture might be worth consideration. You can find out more about this architecture in your SharePoint 2013/2016 documentation.

Equilibrium's MediaRich technology has been tested and currently works with a number of Remote BLOB Storage Systems, including Metalogix StoragePoint™, including their auto-loading technology Librarian and AvePoint DocAve™.

Integrating with SharePoint

As its name implies, the MediaRich ECM for SharePoint Connector works with the MediaRich Core Server to extend SharePoint's capabilities. MediaRich ECM empowers users to activate rich media

management, and provides delivery options on almost SharePoint document library. MediaRich ECM also provides advanced metadata search, batch-processing and state-of-the-art video playback.
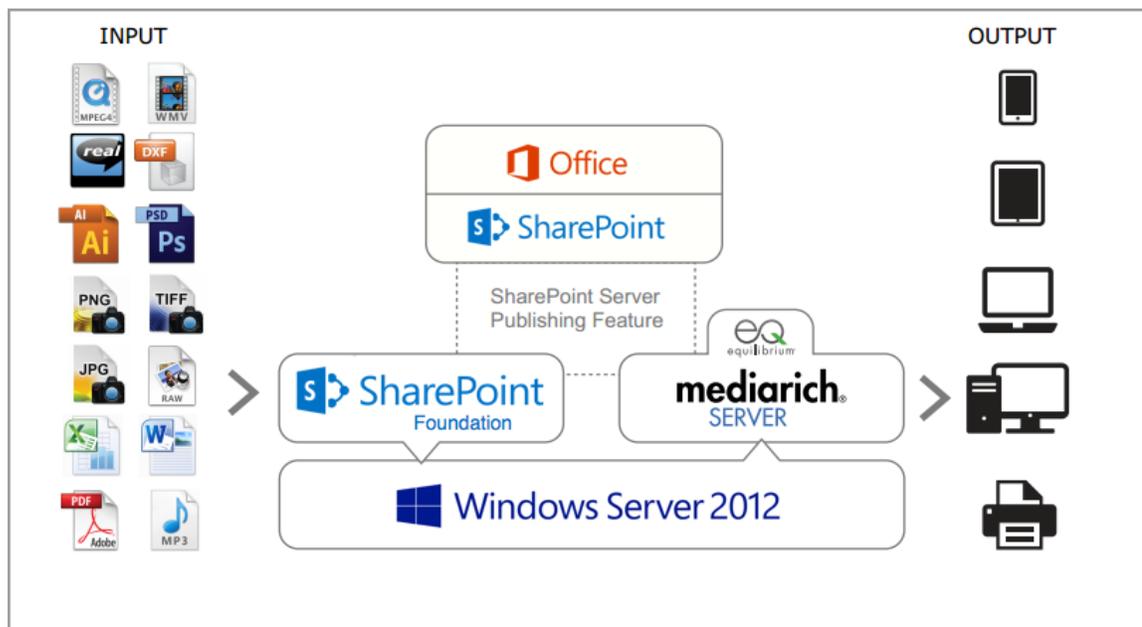

Figure 1: MediaRich ECM for SharePoint Architecture

Specifically, the MediaRich ECM for SharePoint Connector is comprised of the following:

• InstantOn™, which provides ability to activate advanced digital asset management features, browser zoom/pan of images, and import/export support for industry-standard metadata formats for images and video

• Instant upgrade to the SharePoint Search (Basic, Advanced, Enterprise/Fast) for finding images, videos, PDF files, and over 450+ file types

  From the thumbnail EQ Toolbar, it adds to the image display throughout SharePoint so that content can be exported (with support for crop, rotate, multiple output formats, and customizable operations) or added/subtracted to the MediaCart for batch processing and delivery to different destinations.

• MediaCart, which provides administration tools to transform and deliver multiple images

  In the MediaCart, users can choose from dozens of publishing options to transform multiple images in a single batch operation.

• An administration site, which is used to install MediaRich components, modify properties, and view the status files for the connected MediaRich ECM for SharePoint Servers

About Metadata Encodings

With MediaRich ECM for SharePoint, users have the opportunity to work with industry-standard metadata formats. These advanced metadata are contained in the content type "MediaRich Document" that is provisioned when the MediaRich settings are activated on a library.

Important: While MediaRich Core, the MediaRich ECM for SharePoint Connector, and

SharePoint all support Unicode, some metadata standards (such as IPTC) do not. Therefore, if users enter Unicode characters as metadata, they will encounter errors when using features such as Export or the "merge metadata" action of the MediaCart because the metadata cannot be embedded in the desired image files.

MediaRich CORE Server Configuration

The MediaRich suite of client/server products is built on a common server platform called the MediaRich CORE. The MediaRich CORE is a scriptable, scalable, and extensible server architecture that implements and executes media processing requests initiated by a client application.

MediaRich CORE Capacity Planning

Equilibrium recommends dedicated MediaRich CORE Servers based on a number of factors, including active users and the volume of files and types of files to be processed, with a minimum of two servers to provide failover and redundancy. The second server also greatly enhances the performance of processor-intensive activities, such as video preview generation and batch-processing of files.

If you expect heavy usage of the MediaCart batch processing functions, additional MediaRich Core servers are recommended.

Note: When planning your physical architecture, you should consider the overall bandwidth load of your SQL and SharePoint servers and discuss this with your Equilibrium professional services representative.

Refer to Managing MediaRich Servers in the *MediaRich CORE Installation and Administration Guide* for detailed information about configuration of the MediaRich Server.

Choosing a database type

SharePoint relies on an SQL Server database to store site data and content, as well as server configuration information. Refer to the SharePoint documentation for more information about the database type for your implementation.

MediaScript Requests

MediaRich CORE Server is a patented, powerful, and massively scalable media processing engine that is script-driven and accepts media-processing requests over your internal network. These requests direct the MediaRich Server to run a *MediaScript* to process and return the a derivative media asset from the digital master. MediaRich CORE automatically manages all the derivatives for visualization in its own server cache and does NOT require additional storage in the database for anything but the

extracted IPTC, EXIF, and XMP/XMP2 metadata extracted automatically. MediaScripts provide the power and flexibility of the MediaRich Visualizer for SharePoint server with an ECMA-compliant Java based scripting language which we have expanded to provide a wide range of media operations. These, over 300 high quality image and video editing operations are built for speed and therefore can process files extremely fast, enabling on-the-fly transformations of content making on-demand exporting and high volume content preparation practical at scale.

Equilibrium has created a series of MediaScripts that are used as part of the SharePoint Connector and these should **never be modified at any time**. Any modification of MediaScripts used for the dynamic visualization of content will disable Equilibrium's ability to support you properly. There are MediaScripts used within the Import Menu and the MediaCart batch processing capability that can be customized as needed for automatic branding requirements or adding additional functions.

For information about developing MediaScripts, refer to Using MediaScript in the *MediaRich CORE Programmer's Guide*.

Shared Folder

The shared folder is the location where MediaRich ECM for SharePoint obtains global properties, scripts, fonts, ICC profiles, and media. It is also where it writes logs. A single shared folder is used by multipleMediaRich ECM servers.

This shared folder is referred to as *MediaRichCore/Shared*.

Windows Services

The MediaRich ECM for SharePoint server comprises two Windows Services: the MediaRich Media Generator service and the MediaRich System Monitor Service. These services can be run as either LocalSystem or a domain user. The users require read and write access to the top-level site, all its subsites, and the BatchOut folder (if you plan to save MediaCart output to disk).

Virtual File System

MediaRich ECM for SharePoint implements its own virtual file system for reading and writing data. This file system is fully customizable, allowing users to define various input and output repositories for specific purposes in advanced installations.

MediaRich CORE accesses files by defining a number of virtual file systems. To define your own file system alias, create the entry in the MediaRich properties file using the administration utility. For more information, refer to the *MediaRich CORE Installation and Administration Guide*.

By default, MediaScripts are located at `MediaRichCore/Shared/Originals/Scripts`.

BatchOut Folder

The *BatchOut* folder is the root folder where batch processing results from the MediaCart can be stored to a shared network drive. Results for each batch processing job are generated in a user-specified sub-folder of the BatchOut folder. Depending on the requirements of your SharePoint users, this will typically be a network share that is accessible to the appropriate users.

The MediaRich ECM for SharePoint administrator must set up this folder in a manner that is consistent with the needs of the SharePoint users. MediaRich ECM for SharePoint provides mechanisms to assist with this, but due to the wide variety of end-user requirements, the exact configuration must be determined by the site administrator.

Log Files

MediaRich ECM for SharePoint server maintains several log files containing information about errors during processing. These log files reside at the following physical locations:

- **MediaGenerator.log** — This file is located in `MediaRichCore/Shared/Logs/<computername>` (where <computername> is the network name for the server). Each server connected to `MediaRichCore/Shared` has its own log file in this folder.

- **ScriptErrors.log** — This file is located in the `MediaRichCore/Shared/Logs` folder.

- **Batch.log** — This file is located in the `MediaRichCore/Shared/Logs` folder.

- **SharePoint.log** — This file is located in the `MediaRichCore/Shared/Logs` folder. Script errors that occur in the MediaRich ECM for SharePoint environment go to this log.

InstantOn Everywhere

With MediaRich ECM for SharePoint InstantOn™ capabilities, MediaRich features (including rich thumbnailing, image transformation, and enhanced metadata) can be enabled, within seconds, for nearly any existing SharePoint library.

Note: If you have worked with previous editions of MediaRich ECM for SharePoint, you are familiar with the MediaRich site collection templates. These templates contain collaborative spaces with MediaRich advanced features enabled.

Beginning in the release 4.3, the MediaRich workspace templates are no longer available. However, if your organization is currently using the legacy MediaRich workspaces from previous versions, these are still operational following your upgrade to version 6.0 and continue to be supported by Equilibrium.

Installing MediaRich Visualizer for SharePoint

Before starting the installation process, please review all of the sections in this chapter. It is important to follow the instructions to ensure all components are installed and operating correctly.

> *Important:* This document covers MediaRich Visualizer version 6 for SharePoint 2013 and 2016. **Do NOT use this information for upgrading from SharePoint 2003, 2007, or 2010**. If you require an upgrade from these prior releases of SharePoint, please consult Microsoft's documentation for upgrading the SharePoint environment first. You can then migrate the data into the new MediaRich Visualizer for SharePoint.

This chapter focuses on the installation and configuration of the MediaRich Visualizer for SharePoint Connector; however, there are some references to the configuration of the MediaRich CORE Server, which provides the seamless visualization of all the file types and the on-demand media processing capabilities. For more information about the installation and configuration of the MediaRich CORE server, please refer to the *MediaRich CORE Installation and Administration Guide*.

Chapter summary

Installation Overview

Upon completion of the installation process described in this chapter, your organization's users will be able to experience enriched digital asset management capabilities within your SharePoint sites. With the easy InstantOn™ activation, your sites will immediately provide the following functionality:

- Industry-standard metadata extraction
  - IPTC - Image Metadata
  - EXIF - Camera RAW
  - Office Files - Enhanced Metadata extraction automatically occurs from PPT, PPTX, XLS, XLSX, DOC and DOCX Office files
  - XMP/XMP2 Metadata extraction - Adobe PSD, AI, PS, PDF and other File type extraction
  - File information - MediaRich extracts a number enhanced metadata fields from all files
- The custom MediaRich Document content type
- UniZoom capability

  Users have detailed, multi-page views of images and documents on any device or browser, without the need for an image editor or word-processors
- Video previews

  Video previews are available in any document library or asset library, providing larger video playback and scrubbing, supporting over 55 video file types including: .mov, .aac, .mp4, .mp3, .m4v, .flv, .avi, .wmv, .wma, .ts, .mpeg2, .mpeg1, and many more.

> *Note:* HTML5 playback on browsers is available and can be configured for external devices. Other SharePoint features typically use Silverlight Player.

- Sophisticated file-export options that provide self-service, just-in-time renditions for all types of content
- Batch-transformations to provide uniform output from multiple files. Destinations include the following:
  - External file locations (such as a web-team folder or an FTP location)
  - SharePoint Department folders in the MediaRich Batch Output locations
  - Your own MediaBatch output location
  - Any location inside the current Site Collection
- Multiple delivery options that include Zip and Download, email, and transfer to SharePoint libraries

There are additional features that can be activated by SharePoint Farm Administrators, including the following:

- Advanced Search options that allow users to search on specific metadata fields
- FAST Search integration, showing all visualization and specific metadata field search in FAST
- HTML5-based delivery of video, regardless of user's platform, browser, or device
- Localized multi-lingual library support for English, French, German, Dutch, and Arabic languages

> *Note:* You can also add your OWN localization files. If you want to add any language, it can easily be done. Simply call 1-855-EQUILIB or +1 415-332-4343 and Dial 4 for Product Information and Sales Support.

For more information about activating these additional features, see "Customizing Your Installation" on page 79.

Supported Authentication Protocols

MediaRich ECM for SharePoint supports Forms-Based authentication and NTLM-authentication methods. Kerberos is not supported at this time.

In order to implement MediaRich ECM in an Extranet environment, there are two recommended options. The first option is to use secure sockets layer (SSL) encryption in conjunction with one of the supported methods.

An alternative option is to disable the MediaBatch™ Uploader feature for the sites deployed to the Extranet. The MediaBatch Uploader can be disabled by a Site Collection Administrator. For more information about deactivating the Batch Uploader, see "Disabling the Batch Upload Feature" on page 92.

Preparing for Installation of MediaRich ECM for SharePoint

The MediaRich ECM Connector can be installed on any server that is running SharePoint 2013/2016 services (such as the Central Administration Server, or Web Front End). The solution will be deployed to the entire farm. The user account running the installer must be a member of the Local Administrator group on the server and **must have Site Collection Administrator** rights on the collection(s) where the solution will be deployed.

Before installing MediaRich ECM, you should carefully plan your configuration. This planning includes the following tasks:

• Determine the number of MediaRich CORE Servers that you will need

> *Important:* While it is possible to have multiple SharePoint installations/MediaRich Visualizer for SharePoint Connectors pointing to a single MediaRich CORE Server, Equilibrium **does not support** this type of architecture. This can cause conflicts with the CheckSharePoint.exe tool and synching the cache on the SharePoint installation.

• Decide whether you will have multiple MediaRich CORE Servers in a cluster using the default round-robin method (such as "Mgen1 and Mgen2"), or if you will have different servers on different SharePoint WFEs

For example, you might have a completely separate stack for an Extranet Portal, or have multiple generators each for different departments.

> *Important:* If you purchased the optional expanded APIs to utilize MediaRich CORE for direct-

> to-website content generation or other custom .NET, Java, C#, or COM API use, you MUST install MediaRich CORE in a separate location and not as an "All-in-One" configuration with SharePoint.

- Determine where results of batch processing output will go and how users will access these results
- Identify the server names where you will install MediaRich CORE Server

  The name(s) will be required when you configure the Connector.
- Ensure that each of these servers meets the recommended hardware requirements and the appropriate software is installed:
  - Dual 3+ GHz Intel® Xeon Sandy Bridge and later
  - 8 GB memory
  - Microsoft Windows Server 2012R2 or later
  - Microsoft Internet Information Services® (IIS) and ASP.NET with Sub-components
- For processing large HQ videos such as 4k, UHD or 1080P, images, multi-page documents (Bare metal is highly recommended for video transcoding), ensure that the following system requirements are met:
  - 8 Core Intel Xeon Sandy Bridge and later
  - Dedicated MediaRich Server 8 Core License in shared cache configuration
  - Windows Server 2012R2 and later
  - Dedicated cache volume 4 x 250 GB Disk 15K SAS RAID-10
  - OS-Volume 2x150 GB/SAS/10K mirror
  - 32 GB Ram

  > *Important:* If you intend on handling very large videos in HD 720P or higher, and are looking to maximize throughput with MediaRich's optional GPU capability in the future, we HIGHLY recommend purchasing Intel Sandy Bridge and later capable chipsets. This will provide the best option for increasing throughput in the future.

- Determine any localization options that are required (English, French, German, or Dutch).

  MediaRich ECM is Multi-lingual SharePoint Site Compatible. This means that a French group can be in the same library in "Francais" as a Nederlands group in "Dutch".

As described previously, it is possible to install a MediaRich CORE Server on the same machine as the SharePoint 2013/2016 instance where the Connector resides; however, it is **NOT** recommended. Both the MediaRich CORE Server and SharePoint require substantial processing power and memory for optimal performance.

Additional support options for the MediaRich Server

LibreOffice is an optional installation, but provides support for Office documents and other file types. For Windows, this is Libre office 6.0 or later is required with the current versions of Media Rich.

> *Important:* As of MediaRich ECM 4.3.1, Open Office is **no longer supported**. (Open Office lacks

maintenance and updates since the split to LibreOffice.)

Installing the MediaRich CORE Server

The MediaRich CORE Platform is designed for deployment across a shared network. A shared network deployment also allows the server to receive requests from Web servers utilizing MRLs, generate the requested image from an original source file, and return the image to the web browser.

The following sections provide basic information for installation of the MediaRich CORE server in preparation to connect to SharePoint. Refer to the *MediaRich CORE Installation and Administration Guide* for more information on setting up and managing MediaRich CORE Servers.

Pre-Installation Check List

The MediaRich CORE Server installer walks you through the installation process. Before proceeding with this installation you will need the following resources:

- The domain, name, and password of the Service User account you will use for running the MediaRich Visualizer for SharePoint services

  The following rights are required for this Service User:
  - "Log On as a Service" rights
  - Read/write access to the MediaRich CORE shared folder called "BatchOut"
  - Read/write access to Windows SharePoint Foundation services
  - Local Administrator access on the server(s) on which it will be installed.

- The shared folder that you will use.

  If you are installing only one MediaRich CORE Server, use the default location, `MediaRichCore/Shared`. If you have already installed a MediaRich Server and created a network share for that shared folder, you can select it by using the MediaRich Administration tool to edit `local.properties`.

- The location of the BatchOut folder

  It is easier for users to access generated files if this is a shared folder on a network, and has an intuitive name. After creating the share, be sure to give read/write permission to all users of the batch processing feature as well as the MediaRich service user.

- The License File you received from Equilibrium, copied to the Machine / Server and extracted (unzipped).

Scheduling downtime

The installer for the SharePoint Connector will perform an IISRESET to your SharePoint servers in the farm. For this reason, it is **strongly recommended** that any installations on your production servers are done in accordance with your organization's policy regarding user notification and planned outages. The amount of time required on your development and QA/staging farms will provide a basis from which you can estimate the downtime you will allocate for the production farm install.

> *Important:* It is **very** important that standard test installations are done with a staging and/or development environment first, before deploying to production.

Running the MediaRich Server Installer

The MediaRich CORE installer is supplied as a standard Windows installer package. To begin the installation, double-click the installer package to run it. The installer guides you through the installation process.

> *Important:* If you choose to run MediaRich CORE as a specific Service User, be aware that, for security reasons, this dialog does not check the validity of either the account name or the password. It only checks the password against itself so that you can be assured that it was entered correctly. This dialog does not guarantee that the password itself is the correct one or that the account name you choose has adequate permissions.

The Windows installer can install MediaRich for the following languages: English, German, French, and Dutch.

To install the MediaRich on a Windows server:

1. Run the Server Setup with Admin Privileges.

   The Setup will request a User Account.

2. Use the User you created for the MediaRich Server.

   For example, <Domain>\User and the Password.

3. When the installer completes the process, perform the initial configuration in the MediaRich CORE Administration Utility.

Initial Configuration

After you first install MediaRich CORE server, complete the following tasks to enable the system:

1. Launch MediaRich CORE administration tool.

   You can double-click **MediaRich CORE Admin** in the Equilibrium\MediaRich CORE Admin folder or select **Start > All Programs > Equilibrium > MediaRich > MediaRich Core Administration**.

2. Log in using the default credentials: User `admin`, Password `admin`.

3. When the User Interface appears, select **Install a License File**.

4. Locate and select the unzipped license file.

5. Click the **Configure** button to open the MediaRich Server Options dialog.

6. Check if the Virtual Drives point to the drives you want to use for the Server Cache:

   - VideoProxy: file location for the preview Clips
   - batchout: target location for the MediaCart Results
   - merchandizer (no changes needed)
   - mrdocs (no changes needed)

- pyramid: file location for the Pyramid Zoom files
- annotations: file location for annotation data

> **Important:** This is the storage for all MediaRich ECM for SharePoint annotation data. You should make sure this is stored at a secure location and backed up regularly.

7. Click **Start Server**.

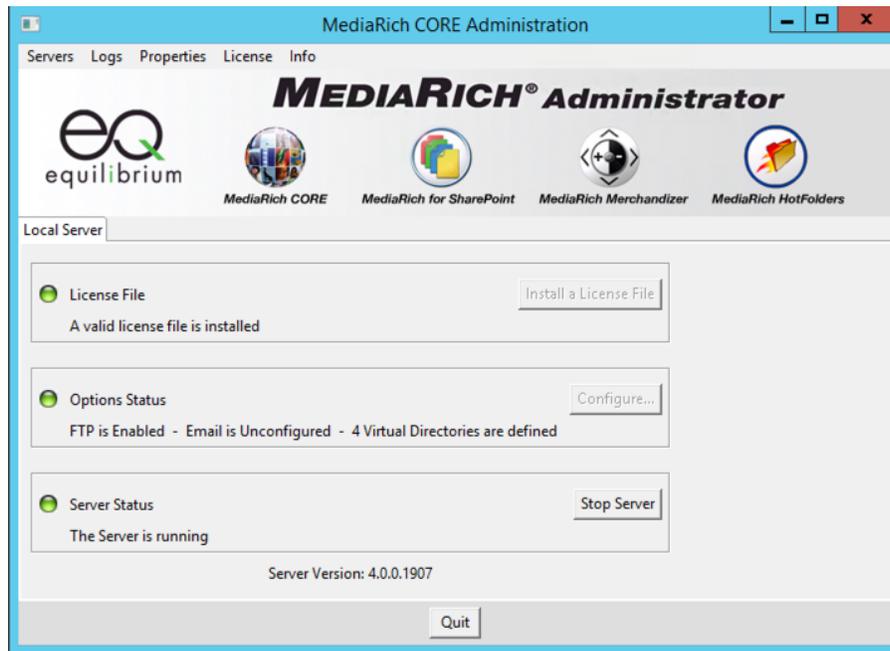   If the three indicators are green, the Server portion of the installation was successful.

Figure 2: Successful start of the server

> **Note:** You can make additional configuration changes and additions after you verify a successful installation. To make these changes, you must stop the server. Click **Stop Server**; the status of the server will change when the server is stopped.

8. Click **Logon to "Local Server"**.

   When you are logged in to a server you have full permission to perform any administrative functions. The first time you log in using the MediaRich CORE administration utility, use the default of `admin` (lower case only) for both the username and password. Be sure to change these defaults so that you can restrict access to authorized personnel only.

Setup Type and Component Selection

If you are installing multiple MediaRich CORE Servers and you already have an accessible shared folder (required to share the same managed cache), you can select it by using the MediaRich Core administration tool to edit `local.properties`.

To set up the shared folder for output:

1. Select **All Programs > Equilibrium > MediaRich > MediaRich Core Administration** to launch the MediaRich Core administration tool.

2. Click **Logon to "Local Server"**.

   When you are logged in to a server you have full permission to perform any administrative functions. The first time you log in using the MediaRich CORE administration utility, use the default of `admin` (lower case only) for both the username and password. Be sure to change these defaults so that you can restrict access to authorized personnel only.

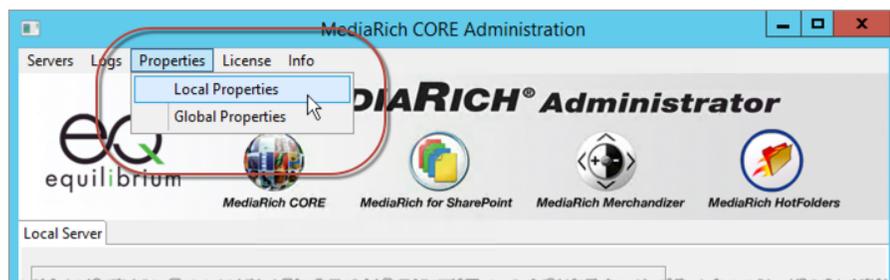3. In the administration tool, select **Properties > Local Properties**.

Figure 3: Accessing MediaRich Core local properties

4. Scroll down to the setting labeled **Path to a Shared file system that contains generated images and dependencies**.
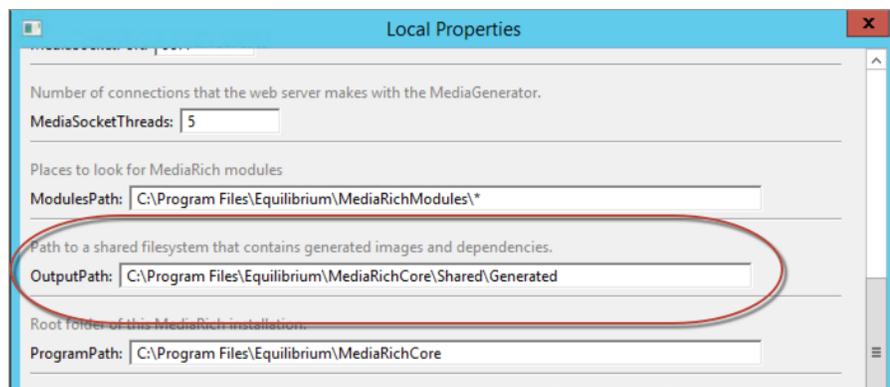

Figure 4: Specifying a shared folder for output files

5. Enter the path for shared folder.

6. Click **OK**.

The Service User

The service user is the account used to run the MediaRich Media Generator Service and the MediaRich System Monitor Service. This user is set up by default as LocalSystem. This user must have read/write access to the following:

- The `MediaRichCore/Shared` folder
- The `MediaRichCore/BatchOut` folder on the MediaRich server
- Windows SharePoint Foundation Services

Select the Shared Folder

The shared folder (`MediaRichCore/Shared`) is where scripts, content, global properties, and log files for MediaRich for SharePoint are installed. You can use the default location.

MediaCart Output Location (BatchOut)

By default, MediaRich selects the root location for batch-processing results (BatchOut). If you created a network share for this location, you must modify the `local.properties` file in a text-editor or use the administration utility to modify the properties. The installer does not create this folder if it does not exist. If you are planning to create a network share, you should create this folder and share it after finishing the installation.

The MediaCart Output location is the default setting for the MediaCart, so it is important to use a directory that is available to all appropriate users.

License Keys

A license key file (license.bin) is required to run MediaRich Visualizer. If you already have this file, you can select it during the installation.

The license key is delivered to you after you fill out your License Key Request Form.

> *Important:* If you did not receive the license yet, please contact your Sales or Professional Services representative.

Your license key indicates the number or users that are supported by your MediaRich Visualizer system. If you need to increase the number of users, contact your Sales or Professional Services representative to acquire an updated license.

Exceeding the license

If your exceed you license, the system will issue a warning via email to the Site Collection Owner, such as the following:

```
This installation is only licensed for 100 users of MediaRich, however, there are
currently 142 users using the MediaRich feature. You have approximately 25 days
left to rectify the issue before the MediaRich features are disabled.
```

Please make sure to contact your Sales or Professional Services representative as soon as possible to avoid outage of MediaRich features.

If the license is not resolved before expiration, InstantOn, Export, MediaBatch, UniZoom, and file ingestion features are disabled. If users have uploaded files during this time, you must run `DocLibWalker.exe -pyramid` after the license issue is resolved and MediaRich is enabled again. This is required to add the missing thumbnails, proxies, and metadata to the InstantOn libraries. It is not necessary to use the `-force` option to execute this task.

For more information about this tool, see "DocLibWalker.exe" on page 98.

MediaRich Visualizer Connector Installation

The MediaRich Visualizer for SharePoint Connector installs the MediaRich Visualizer for SharePoint Web Parts and other associated localization files, and the MediaRich Visualizer for SharePoint administration site. Upon completion of the install and configuration, eligible users also have access to InstantOn™. This provides SharePoint users with the ability to activate the robust MediaRich enabled visualization, search enhancements, device and browser independence capabilities, and digital asset management on nearly any SharePoint document or asset library by simply enabling InstantOn in any library.

Prerequisites for Connector Installation

To complete the Connector installation you must have the following information:

- The host name or IP address of the MediaRich Visualizer for SharePoint server(s)
- The SharePoint administrator ID and password
- The SharePoint site collections where you will be activating MediaRich Visualizer for SharePoint features

The installer will deploy a solution (.wsp file) to your SharePoint farm and make changes to the web.config files on your SharePoint servers. While the risk of a problem is low, it is always good idea to make backups of the web.config files prior to beginning any solution deployment. This will provide for an easy rollback if there is a problem, and is well worth the investment of a few minutes.

> *Important:* Before you begin an install of the SharePoint Connector, verify with your SQL DBA team that you have a recent backup of your content databases. If you have only a few site collections, you can also make a site collection backup using the STSADM tool or Powershell.

For a successful installation the user that will execute the setup must have the following special privileges:

- Local Administrator at any WebFrontEnd Server and at the Server where the central Administration from SharePoint is "hosted"
- DB-Owner and Security Admin privileges at any involved MS-SQL Database (configuration databases and content databases)
- Membership in the Farm Administrators Group
- Matching privileges to the Microsoft Setup User as described within the Best Practice for the least privilege, (rights) Installation.

Important: Make sure to match the Microsoft Setup User as described within the Best Practices for the least privileges (rights) for Installation. Complete installation will not be possible unless the correct permissions are available. It is common for a developer to simply use their own login, which might have access to a portion of these areas, but not all that is needed. This will result in an incomplete installation.

Installing the Connector

MediaRich Visualizer for SharePoint Connector is installed on a 64-bit SharePoint server where the Central Administration is installed. Copy the Connector Installer to this Server.

Important: The installation must start at the Server where the Central Administration is installed. The SharePoint Server Service "Microsoft SharePoint Foundation-Web application" must be started at this Server. During the Installation an IISRESET is executed.

Single vs. multiple server farms

If you are deploying the SharePoint Connector to a stand-alone (single server) SharePoint farm, you can use the installer wizard to complete the installation. If you are deploying to an environment with multiple front ends, you can begin the install with the wizard and complete the installation with manual solution import and deployment tasks.

Connector installation

Before you begin the installation, open the SharePoint administration web page (Start > Programs > Microsoft SharePoint (2013 or 2016) Products > Microsoft (2013 or 2016) Central Administration) and take note of the port number embedded in the URL for this web page. For example, consider this typical URL for the admin page:

```
http://2k3entr2x64:37799/default.aspx
```

In this case, the port number is 37799.

To install the Connector:

1. Login to the system with the Setup User.
2. Start the Setup of the connector with admin privileges.
3. Follow the installer prompts.

Manual Solution Deployment

MediaRich's advanced content visualization capabilities are added to SharePoint through the deployment of .wsp solution files. You can add or remove the solution through batch files included with the install. After adding the solution, you then use the SharePoint Central Administration tool to deploy the solution. You can also deploy the solution file with PowerShell or traditional SharePoint stsadm commands.

If you accepted the default Path during the setup, the required files are located at:

SharePoint 2013:
```
CD C:\Program Files
(x86)\Equilibrium\SharePointConnector\MediaRichForSharepoint.wsp
```

SharePoint 2016:
```
CD C:\Program Files\Equilibrium\MediaRich Connector for
SP2016\MediaRichForSharepoint.wsp
```

To add the solution to the SharePoint server or farm:

1. Open the command line in Admin Mode (CMD) and relocate to the path.

   ```
   C:\Program Files\Common Files\Microsoft Shared\Web Server
   Extensions\15\BIN
   ```

   To identify existing solutions, you can run `CheckForMR4SPS.bat`. This runs the `stsadm -o enumsolutions` command.

   If the MediaRich solution is already deployed, it will show in the resulting screen output.

2. Run the following command:

   SharePoint 2013:
   ```
   stsadm -o addsolution -filename "C:\Program Files
   x86)\Equilibrium\SharePointConnector\MediaRichForSharepoint.wsp"
   ```

   SharePoint 2016:
   ```
   stsadm -o addsolution -filename "C:\Program Files\Equilibrium\MediaRich
   Connector for SP2016\MediaRichForSharepoint.wsp"
   ```

   If the Process terminates with success you will receive a matching response. If you receive an access denied message this is probably a result of not running the Command line in Admin Mode.

   Alternatively, you can run the DeployMRSPS.bat file.

   This will execute `stsadm -o addsolution` followed by `stsadm -deploysolution`.

If at some point you need to remove the solution, you can do so by running the RemoveMR4SPS.bat file. This will run the `stsadm -o retractsolution`, which will inactivate the solution command followed by `stsadm -o deletesolution`, which removes it from the solution store.

To deploy the solution:

1. Open the Central Administration at the SharePoint Server and select **System settings**.
2. In **Farm Management** section, click the **Manage Farm solutions** option.

   You will find the Farm solution "mediarichforsharepoint.wsp" with a *Not deployed* status.

3.   In the Solution Management page, click the **mediarichforsharepoint.wsp** solution item.

4.   In the **Solution Properties** page, click **Deploy Solution**.

5.   Keep the default settings and click **OK**.

The MediaRich for SharePoint solution will now deploy.

After the process is complete, you should receive confirmation of the solution deployment. The Solution Management page will display the mediarichforsharepoint.wsp item with a *Deployed* status.
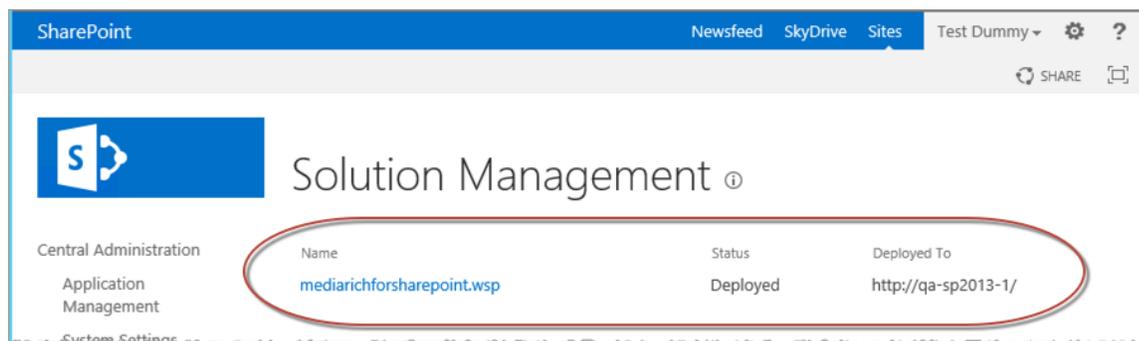

Figure 5: Specifying a shared folder for output files

MediaRich Administration Site Setup

When the installer completes, it opens the MediaRich Visualizer for SharePoint Administration page.

The user performing the administration site setup must be an administrator for the SharePoint site collection where MediaRich is to be a user. Also, the user must be a local administrator on the SharePoint server.

Click the **install** link for each port on which you want to install MediaRich Visualizer for SharePoint; the default is SharePoint 80. This creates the sites and templates for MediaRich.

When the solution is deployed, you can then launch the **MediaRich Administration tool** from the Start menu.
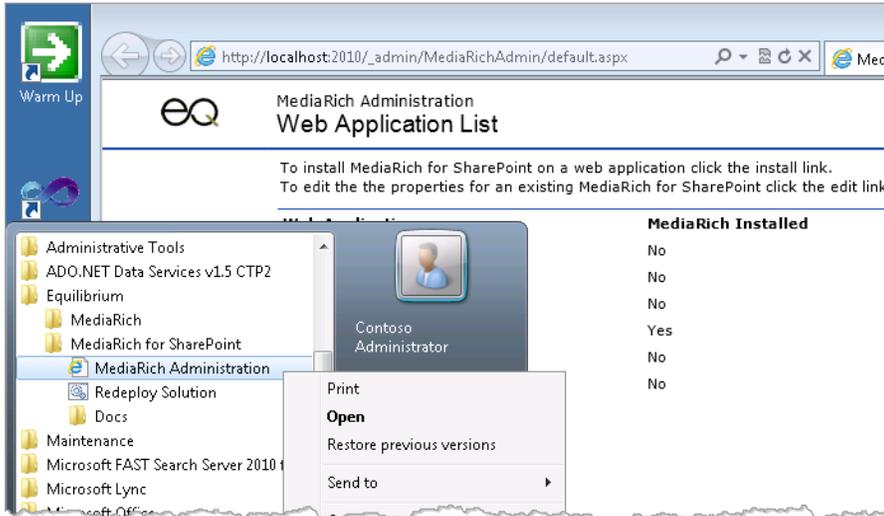

Figure 6: Accessing the MediaRich Administration Tool

When the installer completes, it opens the MediaRich Visualizer for SharePoint Administration page.

Important: The user performing the administration site setup must be an administrator for the SharePoint site collection where MediaRich is to be used; additionally the user must be a local administrator on the SharePoint server.

Click the **install** link for each application/port where you want to install MediaRich Visualizer for SharePoint; the default is SharePoint 80. This creates the sites and templates for MediaRich.
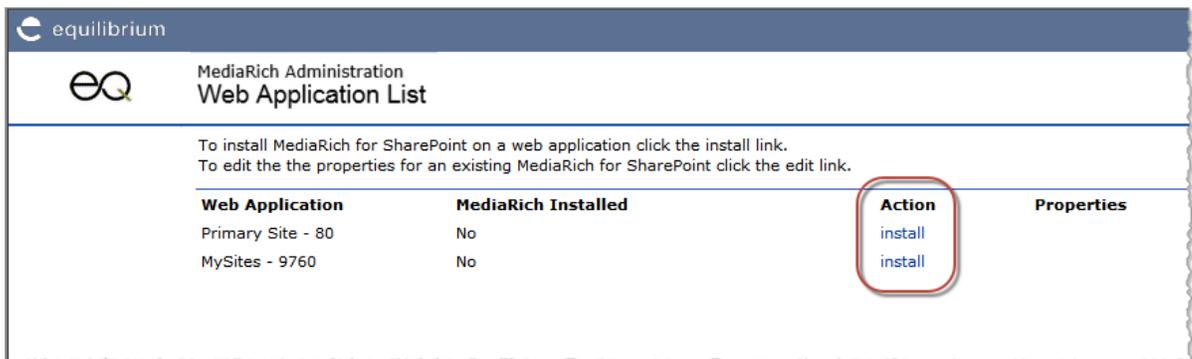
Figure 7: Web Applications List

Specifying the MediaRich Visualizer for SharePoint Server

When configuring MediaRich properties, you will be prompted to enter the IP address or hostname of the MediaRich Server(s). Requests for image processing are sent to these servers. You can enter multiple servers, separated by a comma, and MediaRich will balance the load across the specified servers. If you use a DNS server, the hostname must be resolved.

Figure 8: Specifying the server

> **Important:** Make sure that activated firewalls do not block the port used by the MediaRich Visualizer. The default port is 9877, with both inbound and outbound IP Traffic allowed.
>
> Although that the value defaults to "localhost:9897" on the first installation, please remember that running MediaRich CORE and the MediaRich SharePoint Connector on the same server is not recommended.

You must specify the user name and email address for the administrator (collection owner). See "Email Properties" on page 62 for more information. Click **OK** when the settings are complete.

Administrative properties

In the MediaRich Properties Editor, you can accept the default settings. These properties can be changed at a site collection level at a later time, according to the business / technical requirements. However, to setup initial MediaRich functionality, check the Quality settings for the Video Preview to ensure it meets your initial requirements.

For more information about setting these properties, see "Setting the MediaRich ECM Properties" on page 58.

At the bottom of the page, you can verify that a connection is established to the MediaRich Server.

Figure 9: Verifying the server connection

Click **Save** to retain the settings prior to leaving page.

Run an IISRESET at any WFE Server.

Verifying the MRUPLOAD Virtual Directory

In some cases the MRUPLOAD virtual directory, which is necessary for the "MediaBatch Uploader" feature, is not created with the setup. Check that this Virtual Directory exists by opening the IIS-Manager and selecting the Site that contains the MediaRich Image Workspace.
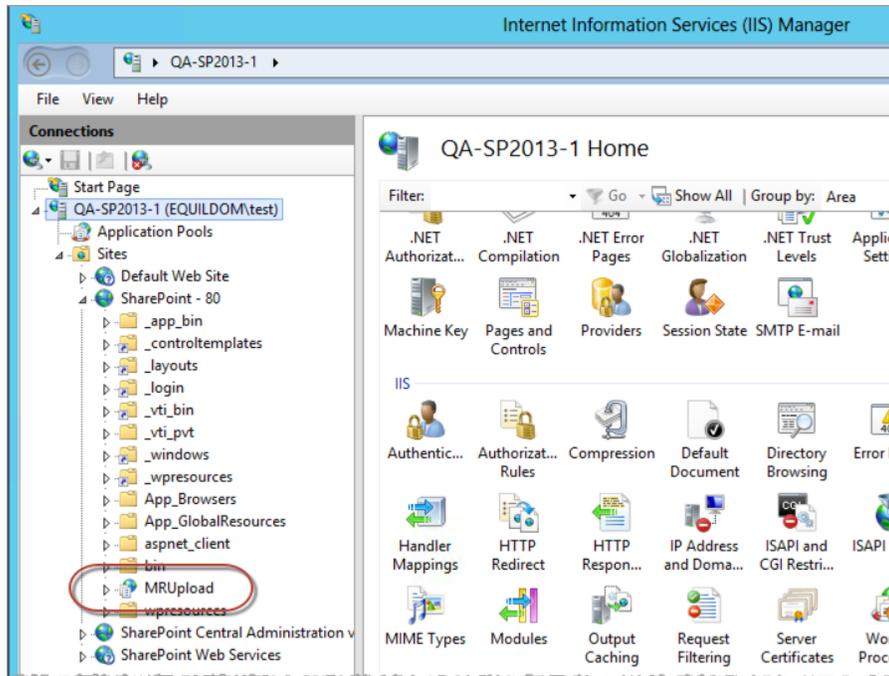

Figure 10: Verifying the MRUPLOAD directory

If there is no directory named MRUpload, you have to create this virtual directory.

To create the MRUPLOAD directory:

1. Right-click in the site window and select **Add Virtual Directory**.
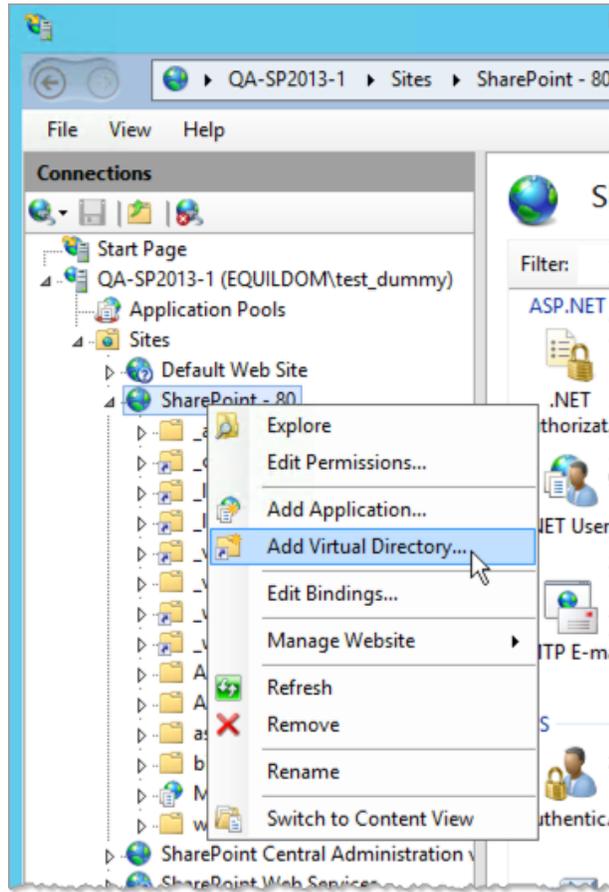

Figure 11: Adding the virtual directory

2. In the Add Virtual Directory dialog, specify the alias ("MRUPLOAD") and the MRUpload Physical Path.

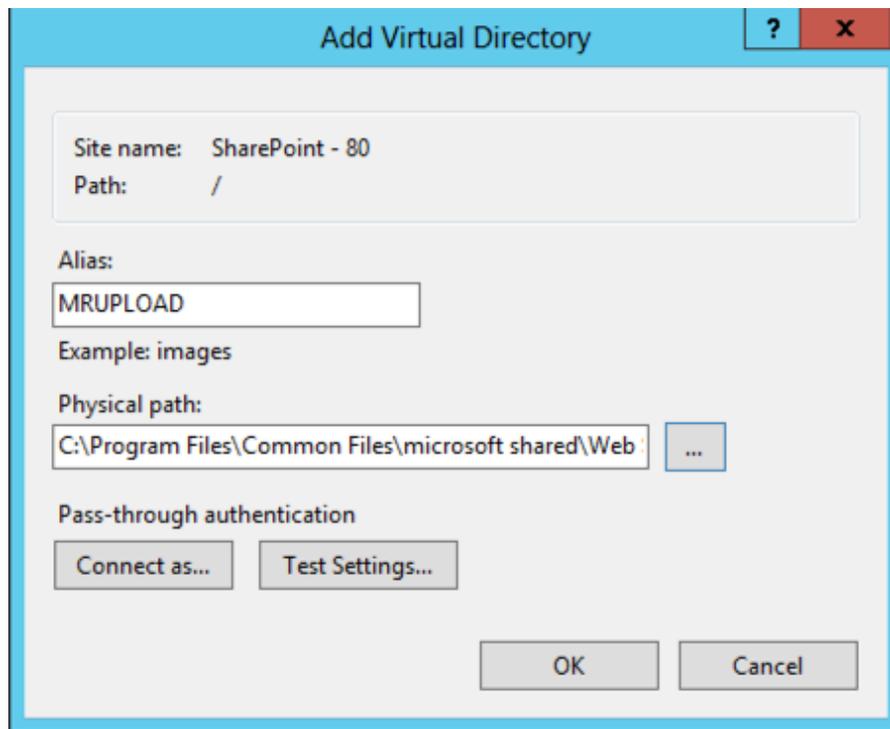   *..\15\TEMPLATE\LAYOUTS\MediaRich\Upload*

Figure 12: Specifying the alias and path

3. Click **OK**.

> *Important:* On Installations with several WFE Servers, this must be done for each one—that is, for all Sites that contain the "MediaRich Image Workspace."

MediaRich Subsite Installation

The default MediaRich SharePoint Connector installation creates a single top-level MediaRich web site shared by all users on the application. You can add independently controlled MediaRich installations to any top-level site on the application, so that one application can have multiple sites. Each top-level site where MediaRich was installed has its own properties list, which is used by MediaRich document libraries, and Web Parts located within that site collection. For large-scale users, this allows customization of MediaRich on a per-site basis.

Figure 13: Site Collection List

It is STRONGLY recommended that you perform a subsite installation for the following reasons:

- It ensures that users are able browse within the same site collection to place items in their MediaCart.

- It is REQUIRED to support the ability for MediaCart to save to another destination anywhere inside the Site Collection. Otherwise, the user will be limited to saving files the MediaCart output area only.

Note: The subsite installation can be performed at any time after MediaRich is installed. It is provided for users who wish to customize the behavior of MediaRich on a site-collection basis, rather than on a virtual-server basis.

CHAPTER 4

Upgrading MediaRich ECM for SharePoint

MediaRich ECM for SharePoint is fully integrated with the MediaRich CORE server, version 4.0.4 (or later). Upgrading your MediaRich environment involves upgrading the MediaRich CORE server before you update the MediaRich ECM Connector.

> *Important:* If you have a version of MediaRich ECM for SharePoint older than 5.0 and/or a version of SharePoint older than 2013, contact Equilibrium's Professional Services for help planning your upgrade.

Chapter summary

Upgrade Overview

This release of MediaRich ECM for SharePoint supports an upgrade of the MediaRich CORE server from 4.0.x to 6.2 and the SharePoint Connector from 5.0 to 6.0. The following sections assume the upgrade of an environment with a single MediaRich CORE server and a customized cache path. If your current environment includes multiple CORE servers, consult with your Equilibrium representative for the additional upgrade procedures that are required for your configuration.

> *Important:* If you have an earlier version of the MediaRich ECM for SharePoint Connector (prior to 5.0), consult with your Equilibrium representative for the additional upgrade procedures that are required for your environment.
>
> Starting with the 5.0 release, email settings (SMTP server and Site Owner email address) are required for MediaRich ECM for SharePoint environments. These settings are used for ongoing validation of your MediaRich ECM for SharePoint licensing. For more information, see "Email Properties" on page 62.

Legacy QuickTime Support

In MediaRich CORE 4.0, Equilibrium introduced its new A/V Core 2.0, which initially supports the latest ffmpeg and Quicksync GPU transcoding. However, for historical workflows, or in order to use any of the QuickTime video features on the Windows platform, such as specific plug-ins available for QuickTime, you must ensure that QuickTime is installed. You can download the QuickTime player for Windows at http://www.apple.com/quicktime. Run the setup file to install QuickTime. The MediaRich server may need to be restarted after installation.

MediaRich Image Workspaces in Version 6

If you have worked with editions of MediaRich ECM for SharePoint prior to 4.3, you are familiar with the MediaRich Image Workspace templates. These templates facilitated the creation of SharePoint sites, and site collections with advanced image-management and delivery features enables. With the InstantOn Everywhere technology that was introduced in version 4.3 of MediaRich ECM for SharePoint, library owners and designers can activate MediaRich features on almost any SharePoint document library and now asset libraries.

Because of the convenience and flexibility of offered by InstantOn, including the ease of customization SharePoint designers and developers require, the MediaRich Image Workspaces are no longer offered beginning with MediaRich ECM version 4.3. However, sites created by MediaRich Workspace templates will continue to be fully operational after the upgrade to version 5.0 and 6.0 and these legacy sites will continue to be supported by Equilibrium.

> *Note:* To achieve functionality that is similar to the MediaRich Image Workspaces, InstantOn provides document libraries and asset libraries with similar light table capabilities.

With Light Table view, many parts of the ImageBrowser WebPart are superseded by improvements to seamless integration throughout the product for SharePoint 2013 and 2016. This includes the one-click features and thumbnail tool bar, as well as the ability to view, watch, and hear all files in the library.

Upgrading the MediaRich CORE Server

To upgrade an existing MediaRich CORE 3.9.x server to 6.2, you will use the MediaRich CORE Installer to install the new MediaRich CORE Platform. The tasks involved in the server upgrade vary depending on your existing file structure and level of customization specifically for a MediaRich ECM for SharePoint environment. Review all of this information to determine which are appropriate for your system.

Important: You should ensure that your server meets the system requirements for MediaRich CORE 6.2 and perform any system upgrades that are required before upgrading MediaRich. For more information, see "Preparing for Installation of MediaRich ECM for SharePoint" on page 27.

Before you perform a MediaRich CORE upgrade, you must copy the .zip file to the MediaRich CORE server.

- Log into the server with the appropriate administrator permissions.
- Copy the file to the server.
- Extract the .zip file on the server.

Also, review the included README file. This file contains important information about the MediaRich CORE installation and changes to the system.

MediaRich CORE version 4.x and later is 64-bit only, while version 3.x is 32-bit only. If you did not make changes to IIS to accommodate the 32-bit requirement for version 3.x, no changes to IIS are required. (Most Hot Folder and MediaRich Visualizer for SharePoint licenses do not include Web capabilities, so the changes to IIS might not have been required.) However, you should check the status of the server before moving on to the over-install of MediaRich itself.

Retaining Your Configurations

If you made any customizations to your MediaRich CORE configuration to support you specific environment, you must make a copy of these items so that you can duplicate them in the new 4.0.x CORE server installation.

Important: When you upgrade from CORE 3.9x to 6.2, the install default Path will change from `C:\Program Files (x86)\....` to `C:\Program Files\...` You must modify the default cache path after the installation of the new MediaRich 6.2 64-bit server even if a default configuration is used.

Retrieving Your Cache Configurations

For a customized cache configuration (the cache is moved to a non-default location), you should record the videoproxy Path and the pyramid Path. These settings will be used to configure the upgraded MediaRich CORE 6.2 installation.

To retrieve the cache configurations:

1. Launch the utility application on the MediaRich server.

    Double-click **MediaRich CORE Admin** in the Equilibrium\MediaRich CORE Admin folder or choose **Start > Programs > Equilibrium > MediaRich > MediaRich CORE Administration**.

2. Click **Logon to "Local Server"** (or the display name assigned to the local server) and provide the admin credentials.

3. Click **Stop Server**.

    The status of the server will change when the server is stopped.

4. Click the **Configure** button to open the MediaRich Server Options dialog.

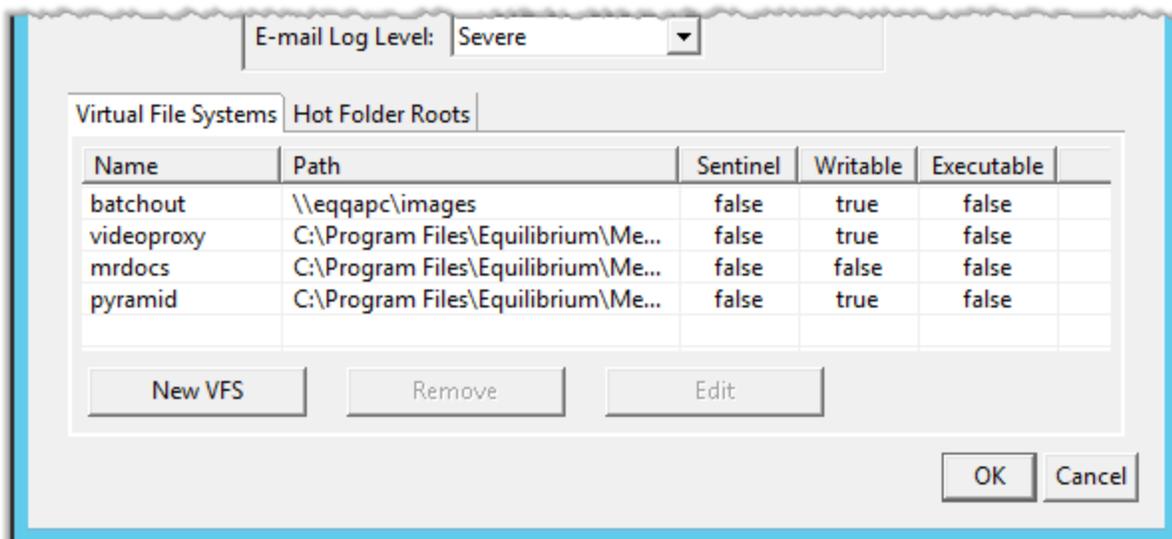   The videoproxy and pyramid paths are configured at the bottom of the dialog.

Figure 14: The configured videoproxy and pyramid virtual paths (defaults)

5. Copy the configuration information for the virtual file systems:

    *   **videoproxy**: This controls the videoproxy path. Within a custom MediaCache configuration the VideoProxy Virtual File System points to a location outside the MediaRich Server base installation path. This could be a second storage volume, an attached storage, or a network share.

        For example: `D:\MR-Cache\MediaCache\VideoProxy`

    *   **pyramid**: This controls the ZoomFile Path. Within a custom MediaCache configuration the Pyramid Virtual File System points to a location outside the MediaRich Server base installation Path. This could be a second storage volume, an attached storage, or a Network share. In many cases, it points to the same MediaCache folder as the VideoProxy Virtual File System.

        For example: `D:\MR-Cache\MediaCache\PyramidCache`

6. Click **OK** or **Cancel** to close the dialog.

Retrieving the Output Path Configuration

Within a custom MediaCache configuration, the OutputPath variable points to a location outside the MediaRich Server base installation path. Like the videoproxy and pyramid cache paths, this could be a second storage volume, an attached storage, or a network share. And in many cases it points to the folder that contains the MediaCache folder containing the VideoProxy and Pyramid virtual file systems.

To retrieve the output path configuration:

1. Choose **Properties > Local Properties**.

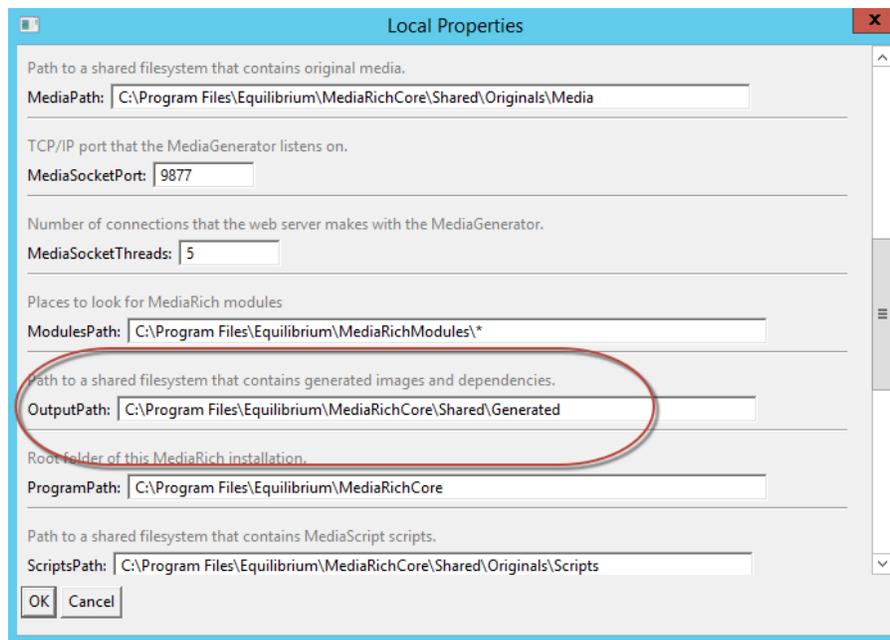2. In the Local Properties dialog, scroll down to the **OutputPath** setting.

Figure 15: The configured OutputPath (default)

3. Copy the configuration information if it does not use the default.

4. *(Optional)* While you are in the dialog, check other paths to determine if they are outside of the default (`C:\Program Files\Equilibrium\MediaRichCore\Shared`):

   - **ScriptsPath**: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals\Scripts` (default)
   - **SharedColorProfilesPath**: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals\Profiles` (default)
   - **SharedFontsPath**: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals\Fonts` (default)
   - **SharedLogsPath**: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Logs` (default)

- **SharedPath**: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\` (default)
- **SysPath**: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals\Sys` (default)

5. Click **OK** or **Cancel** to close the dialog.

Backing Up Your Configuration Files

It is important to backup the contents of your folders where you have saved configurations and custom files.

1. Copy and save the local and global properties.

   Create a full backup of the *local.properties* and *global.properties* files, as well as any *.properties user files. These files are typically found at: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Properties` (default path).

2. Copy and save the Export and MediaCart Script operations.

   Create a full backup of the "SharePoint" folder. This is typically found at: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals\Scripts` (default path).

3. Copy and save the Fonts:

   Create a full backup of the "Fonts" folder. This is typically found at: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals` (default path).

4. Copy and save the Color Profiles.

   Create a full backup of the "Profiles" folder. This is typically found at: `C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals` (default path).

Performing the CORE Server Upgrade

The following information provides a basic procedure for upgrading the MediaRich Server from 3.9.x to 6.2. This information is adequate only for a basic (simple) upgrade where everything resides within the ..\Equilibrium folder. If your system contains this type of customization, refer to the *MediaRich CORE Installation and Administration Guide* for detailed information about the appropriate upgrade process for your CORE server.

> *Important:* Make sure you have the license key from Equilibrium ready when you uninstall the MediaRich Server. You will need this license key to reinstall the MediaRich CORE Server.

To install the MediaRich CORE server:

1. Uninstall Open Office, if applicable.

2. Install LibreOffice.

   MediaRich support for Office documents and other file types will not be available unless a supported version of LibreOffice is installed. For Windows, this is LibreOffice version 6.0.

3. Uninstall the old 3.9 MediaRich CORE version.

If the original MediaRich installer is still on the server, you can run it again and choose uninstall/remove. Alternatively, you can use the Programs and Features control panel.

All custom files, default MediaRich files that are modified, and other important files are left behind after the uninstall. In a default 3.9 installation, this location is the `..\Program Files (x86)\Equilibrium` folder.

4. Use the MediaRich Server 6.2 download to run the Server Setup with Admin Privileges.

   The Setup will request a User Account, which should be the same as previously used.

5. Open the MediaRich Administration utility.

   Login using the default credentials: User `admin`, Password `admin`.

6. Install the license.

   - When the User Interface appears, select **Install a License File**.
   - Locate and select the unzipped license file.

   > *Important:* The license for any older version of CORE (such as 3.9.x) will NOT work with CORE 6.2. If you do not have a new license file for this version, contact your Equilibrium sales representative to arrange for a new license.

7. Start the MediaRich Server.

   All three indicators should be green.

   It is a best practice to reboot the server as well.

8. Stop the server.

   > *Note:* You should not copy the old .properties files to overwrite the new ones in their respective Properties folders. The contents of these files change from version to version, and replacing them with out-of-date versions will lead to unexpected behavior.

Restoring Your Server Configurations

Before the server installation, you completed tasks to collect the files and configurations for your 3.9 MediaRich server (see "Retrieving Your Cache Configurations" on page 48). After installing the 6.2 server, you should use these items to restore your settings and custom files. For many of these tasks, this is essentially re-creating the files that were located in the 3.9 default MediaCache path:

```
C:\Program Files
(x86)\Equilibrium\MediaRichCore\Shared\Generated\MediaCache
```

And placing them is the appropriate folder of the 6.2 default path:

```
C:\Program Files Equilibrium\MediaRichCore\Shared\Generated\MediaCache
```

Restore the Local Properties

Copy the "local.properties_user" file from the Properties folder at the save location to the following location: `C:\Program Files\Equilibrium\MediaRichCore\Properties`.

Restore the Global Properties

Copy the "global.properties_user" file from the Properties folder at the save location to the following location: `C:\Program Files\Equilibrium\MediaRichCore\Shared\Properties`.

Restore the Export and MediaCart Script Operations

The goal for these tasks is to verify that any custom Scripts that you might have created are still available after the upgrade.

1. Restore the batch files.

   - At the save location, open the script Folder and locate the SharePoint\Batch sub-folder.
   - Select all the subfolders and files at this location, **except** for the Output folder.
   - Copy the selected files/folders.
   - Go to the corresponding path of new the new installation:
     ```
     C:\Program Files\Equilibrium\MediaRichCore\Shared\
     Originals\Scripts\SharePoint\Batch
     ```
   - Paste the folders/files.

   > *Important:* Make sure to replace the files in the target destination at the Windows prompt.

2. Restore the export files.

   - At the save location, open the script Folder and locate the SharePoint\Export sub-folder.
   - Select all the subfolders and files at this location.
   - Copy the selected files/folders.
   - Go to the corresponding path of new the new installation:
     ```
     C:\Program Files\Equilibrium\MediaRichCore\Shared\
     Originals\Scripts\SharePoint\Export
     ```
   - Paste the folders/files.

   > *Important:* Make sure to replace the files in the target destination at the Windows prompt.

3. Restore the video batch files.

   - At the save location, open the script Folder and locate the SharePoint\VideoBatch sub-folder.
   - Select all the subfolders and files at this location.
   - Copy the selected files/folders.
   - Go to the corresponding path of new the new installation:
     ```
     C:\Program Files\Equilibrium\MediaRichCore\Shared\
     Originals\Scripts\SharePoint\VideoBatch
     ```
   - Paste the folders/files.

   > *Important:* Make sure to replace the files in the target destination at the Windows prompt.

4. Restore the video export files.

   - At the save location, open the script Folder and locate the SharePoint\VideoExport sub-folder.
   - Select all the subfolders and files at this location.

- Copy the selected files/folders.
- Go to the corresponding path of new the new installation:
  ```
  C:\Program Files\Equilibrium\MediaRichCore\Shared\
  Originals\Scripts\SharePoint\VideoExport
  ```
- Paste the folders/files.

> *Important:* Make sure to replace the files in the target destination at the Windows prompt.

Restore the Fonts

Copy the Fonts folder at the save location to the following location: `C:\Program Files\Equilibrium\MediaRichCore\Shared\Originals\Fonts`.

Restore the Color Profiles

If you have any custom color profiles, copy these files to the new install location.

- At the save location, open the Profiles folder.
- Select all the files at this location, **except** for the "sRGB Color Space Profile" and "USWebCoatedSWOP" items.

> *Note:* These files are optimized by Equilibrium development from time-to-time and the newer installed versions should be used.

- Copy the selected files.
- Go to the corresponding path of new the new installation:
  ```
  C:\Program Files\Equilibrium\MediaRichCore\Shared\Originals\Profiles\
  ```
- Paste the files.

Final Verification of the Server

After restoring your custom files to the new install location, you must restart the server and verify the correct implementation before to upgrade the MediaRich Visualizer for SharePoint connector.

Restarting the MediaRich Services

The next task is to restart the MediaRich Services at the Operating System Level.

1. Restart the MediaRich Core System Monitor Service.
2. Start the MediaRich Core System Monitor Service – Stop the Service.

Verify the Proxy File Cache Settings

Check that the Videoproxy Virtual File system Path and the Pyramid Virtual File system Path points to the custom shared location.

Using the example in "Retrieving Your Cache Configurations" on page 48 where these configuration settings were copied from a custom configuration, this would be the following:

- VideoProxy: `D:\MR-Cache\MediaCache\VideoProxy`
- Pyramid: `D:\MR-Cache\MediaCache\PyramidCache`

Verify the Other Virtual System Paths

Inspect the following virtual system paths in the MediaRich Server Options dialog:

- "batchout"
- "Merchandizer"
- "Mrdocs"

If you find a path that points to the old parent directory (`C:\program Files (x86)\`), correct this part of the path so that it points to the new location (`C:\program Files\`).

Verify the Local Properties

Review the Output Path and modify it, if needed, so that it points to the correct shared location.

Using the example in "Retrieving the Output Path Configuration" on page 49 where this configuration setting was copied from a custom configuration, this would be the following:

- OutputPath: `D:\MR-Cache\`

Review the other path to verify that each points to the correct location:

- MediaPath
- ModulesPath
- PhotoshopPath
- ProgramPath
- ScriptPath
- SharedColorProfilesPath
- SharedFontsPath
- Shared LogsPath
- SharedPath
- SysPath

If you find a path that points to the old parent directory (`C:\program Files (x86)\`), correct this part of the path so that it points to the new location (`C:\program Files\`).

Start the MediaRich Server

Before you move to the upgrade of the Connector, start the MediaRich server.

Installing MediaRich ECM for SharePoint 6.0 Over 5.0

Upgrading the MediaRich ECM Connector on a SharePoint 2013 or 2016 environment is a straightforward process. Before you install the new Connector, make sure that you have uninstalled the MediaRich CORE Server and installed the new CORE 6.2 version. Then provide the same license that was previously in use for that server and start the updated CORE server. (For details about updating the CORE server, see "Upgrading the MediaRich CORE Server" on page 47.)

> *Important:* If you have an older version of MediaRich ECM for SharePoint or an older version of SharePoint, contact Equilibrium's Professional Services for help planning your upgrade.

As a best practice, you should verify that a valid current backup is available for the SharePoint Environment and MediaRich CORE Server and Cache. If at all possible, make sure to complete your upgrade on a test installation within a staged environment before proceeding with a production system.

Make sure to use the SharePoint setup user that you used to install the SharePoint environment when you perform the steps outlined in this section.

> *Note:* The user needs local admin rights at any Web front-end servers to be configured. The user must be a member of the Farm Administrators group. The user should be member of the Owners Group (SQL-Server) for any involved databases.

To upgrade the MediaRich ECM Connector on SharePoint 2013 or 2016

1. Go to the SharePoint **Central Administration > System Settings > Manage farm features**.
2. Find the mediarichforsharepoint.wsp feature/solution.
3. Choose **Deactivate** or **Retract Solution**.
4. Accept the default settings and click **OK**.

   You might want to check if your SharePoint Admin Service is running before you do so.
5. Delete the MediarichforSharePoint.wsp from the Solution Store (Solution/Feature Management) of the Central Administration.
6. On the server, open the Control Panel and use the Add/Remove Programs utility to uninstall the old MediaRich ECM connector.

   > *Important:* This requires an IIS Reset and a SharePoint Timer restart.

7. Install the new connector provided as a download (`MediaRichSPSConnector-Build x SPxxxx.zip`).

   In a multi-server front-end environment, choose **No** on the 'Solution Deployment Option' page.

   In a single-server environment, choose Yes for a single WFE SharePoint installation.
8. *(Multi-Server Front-End)* Edit and run the `DeployMR4SPS.bat` file.
   - Change the only occurrence of `-local` to `-immediate`.

- Save the changes.
- Run the .bat file from a command prompt using administrator privileges.

9. Use SharePoint's Central Administration>Solution Management to confirm that the Solution has been deployed.

10. Run `doclibwalker -upgrade` from a command prompt.

    This could take a while, but shouldn't put much of a strain on the servers.

11. When the installation is complete, open the MediaRich Administration on the SharePoint site to check the connection to the MediaRich Server

12. On the `Web Application List` page, choose **View** sites and then **Edit Properties** on any site where MediaRich ECM was previously installed.

    The MediaRich Properties Editor page retains the previous settings, and three new properties will now appear in support of permissions for annotating files. (For details about setting these new properties, see "Annotation and Redaction Properties" on page 61.)

MediaRich ECM for SharePoint Configuration

Before the installed MediaRich ECM for SharePoint is ready for use by your SharePoint community, there are some initial configuration tasks that are needed enable functionality for your users and groups.

As an administrator, there are also standard tasks required to maintain the existing SharePoint environment, as well as monitor its logs, volumes and backups. This should also include applying the Microsoft recommended patches and security updates to the SharePoint environment and the MediaRich Servers.

Chapter summary

Setting the MediaRich ECM Properties

If MediaRich ECM for SharePoint is enabled for the Web application or Site Collection, you have the opportunity to enhance any existing Microsoft library with thumbnails that reflect the image, document, or video. Additionally, users can zoom in on the document and image thumbnails or playback the preview of a video.

At this point, your SharePoint farm site with MediaRich ECM capabilities can be made available to users. When you complete the activation and initial MediaRich property settings, the library is automatically ingested using Equilibrium's patented MediaRich dynamic visualization technology which provides your users advanced the ability to view, watch, and hear all your files wherever they are displayed in SharePoint, including all SharePoint searches. MediaRich ECM thumbnails over 500 Microsoft® Office®, Adobe®, image and video file types, automatic metadata extraction into the MediaRich Document Type, all-device and browser support for multi-page viewing and HTML5 Video Capability for devices (requires special configuration - see "Adding Mobile HTML5 Video Support" on page 68), as well as, sophisticated image and video rendition and transcoding capability, including dynamic MediaScript™ processing and auto-assembly scripts which can be customized for handling custom media preparation tasks for your entire organization and to external partners (requires Extranet License) automatically.

However, some extended functionality (such as Advanced Metadata Search and localization features) will require additional modifications by a SharePoint administrator. These additional configurations capabilities are described in CHAPTER 6 , "Customizing Your Installation" on page 79.

Your organization can enable advanced MediaRich image-transformation and video-playback features in nearly any SharePoint document library. These activations, called "InstantOn™", can be performed within minutes by any user with adequate access to the library, which would typically include the following:

- Site Collection Administrators
- Owners
- Hierarchy Managers
- Designers

Because the InstantOn feature is available to many types of user roles, the following sections provide a brief walk-through of InstantOn. A more in-depth feature information can be found in the *MediaRich ECM for SharePoint User Guide*.

Basic InstantOn Activation

It is a simple and straightforward process to activate InstantOn™. You begin by navigating to a SharePoint Classic Document Library and changing the library settings. InstantOn can be enabled by Site Collection Administrators or users with the following rights to the document library:

- Owners
- Designers

- Hierarchy Managers
- Contributors

> *Note:* These privileges are library-specific, not site-specific. Therefore, a user with Owner rights to a site who has read-only access to a library cannot activate the InstantOn features. For these users, the procedure for activation of InstantOn is provided in the *MediaRich ECM for SharePoint User Guide*.

To activate InstantOn and access MediaRich Properties:

1. Navigate to the SharePoint Document Library to be activated.

2. Click the link to the Document library on the left-side navigation.

    You can go to the library directly if you have the URL.

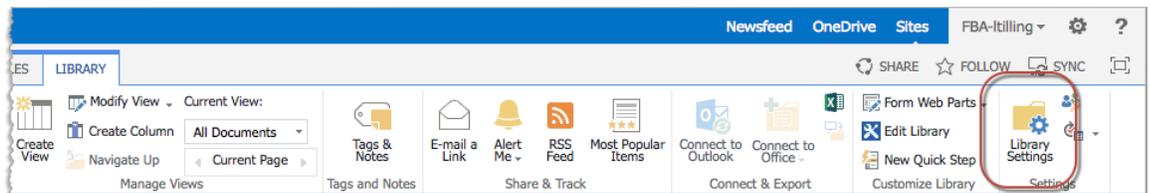3. Select the **Library** ribbon tab and click **Library Settings**.

Figure 16: Accessing the Library Settings

4. In the Settings page, click **MediaRich settings**.

    This opens the InstantOn page.

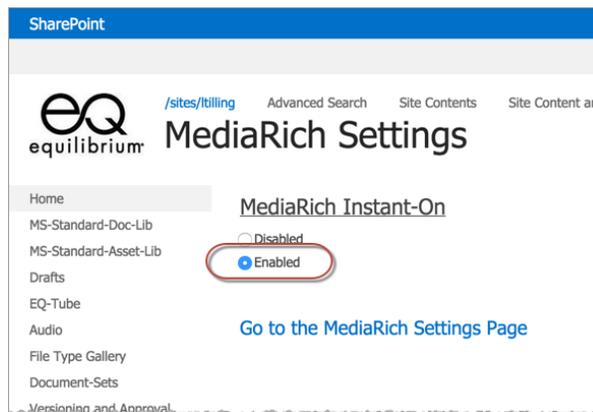5. On this page, select the **Enabled** option.

Figure 17: Enabling MediaRich InstantOn

6. Click the **Go To MediaRich Settings** link.

Working with the MediaRich Properties Editor

MediaRich ECM for SharePoint properties are controlled per application or per site. After some properties are edited (such as those that govern thumbnail dimensions) it might be necessary to restart IIS for the property settings to take effect. If it is undesirable to restart all of IIS, in some cases it could be sufficient to just restart the appropriate application pool.

Note: Restarting the application pool will cause a brief user-facing outage.

Important: Site Collection Administrators can access the MR Properties from any library in a MediaRich ECM-enabled collection; however, the changes ARE NOT specific to that library. Rather, these changes will affect all libraries throughout the collection where InstantOn is activated .

There are many settings that affect the MediaRich ECM features:

- MediaGenerator Hostname (the MediaRich Core server name, which can be an IP Address or a Domain Name)
- Thumbnail, Image, and Video Preview Size settings
- Annotation access permissions
- Email settings
- Pyramid file generation
- Metadata extensions

When you are done with your changes, click the **Save** icon.

Figure 18: The MediaRich Properties Editor

Image and Video Thumbnails

From the Properties Editor, an administrator has control over the size of image and video thumbnails displayed in a MediaRich Library and the thumbnail size within a MediaRich site.

Video thumbnails are more sophisticated than ordinary thumbnails. The same proxy is used for both the small in-line thumbnails and the large pop-up playback. However, a low-bandwidth proxy is also generated for mobile devices and if a device has a slow connection.

Changing the thumbnail dimensions will cause these assets to be re-generated the next time a user views a page containing video items, except for the large video previews. In order regenerate the large video preview, you must take further action. You can choose to delete and re-upload the items, or run the DocLibWalker.exe tool in order to regenerate the video thumbnails with the new settings. For details about the location and usage of the DocLibWalker.exe tool, see "DocLibWalker.exe" on page 98.

Annotation and Redaction Properties

The properties editor provides settings for controlling which users can moderate, create/delete, and view annotations in the UniZoom & Pan window. You can disable access to the Annotation feature at a specific level by clearing the setting, or you can disable all access to annotations by clearing all of these settings.

- **Annotation Moderator Groups**: This setting specifies the groups with the "Moderator" level of annotation permissions (the highest level). These users can delete any other user's annotations, as well as create and delete their own annotations. They also have all the Create and View permissions, so it is not necessary to duplicate the group name(s) for the other permission settings.

- **Annotation Create & View Groups**: This setting specifies the groups with the "Creator" level of annotation permissions. These users can create new annotations and can delete their own annotations. They cannot delete another user's annotations. Creators also have the View permission, so it is not necessary to duplicate the group name(s) for the View permission setting.

- **Annotation View-Only Groups**: This setting specifies the groups with the "Viewer" level of annotation permissions. These users can only view annotations and cannot create or delete them.

The annotation feature first checks the user to see if they belong to any groups and looks to see if any of those group names match those that are specified in these settings. If they do not belong to any groups at all, the annotation feature falls back to the user's global site collection effective permissions, which could give the user more access than you want for annotations. If your OneViewer users' access to annotations should be limited, make sure to assign each user to at least one SharePoint group and assign that group accordingly in the annotation settings. And if you do not want a user to have access to annotations, put the user in a group that is not specified in any of these settings.

> *Note:* The permissions set in the SharePoint group do not affect the annotation permissions for that group. This feature only uses the group name to match against the groups where the

user belongs. If a user belongs to multiple groups and those groups are assigned to multiple annotation permission levels, it uses the group matched in the highest annotation permission level.

If the Annotation feature must use the effective user's permission, the SharePoint user permissions are mapped as follows: Web managers are mapped to Moderator access, users with both the add and delete item permissions are mapped to Creator access , and users with add item permission are mapped to "Viewer" access.

If a setting box is cleared of any groups in order to disable it, this also disables the fallback for checking the user's site level effective permissions. Therefore, users that do not belong to any groups are also blocked from using that level of annotations.

Email Properties

The administrator **must** set the SMTP and Site Owner email address fields for the system. This is required for licensing of MediaRich ECM.

SMTP Server: This is the SMTP email server used to send email batch results and notifications, such as corpmail.acme.com.

Site Collection Owner Email: This is the email address for the site owner, such as BobSmith@acme.com. This is the email address used for notifications if the number of users supported by the license is exceeded.

There is a link next to these two required fields to help test the email configuration and ensure that messages are sent correctly. The first time that you click Save for the properties page, this also performs an email test.

Figure 19: Test the email settings

Pyramid Properties

The pyramid files are the files that are automatically cached so they can be called by the UniZoom feature to provide users with the ability to view images and documents with amazing detail. There are multiple options that can be configured to manage the generation of these files:

- **Maximum Pyramid Dimension.** This property defines the largest dimension to be used for pyramid file generation. If 0 is specified, the full size of the image is used. Otherwise the image is scaled such that the largest dimension in the file is the specified dimension. This can be used for reducing

the size of pyramid files in the cache. However, setting this to a non-zero value will reduce the maximum resolution obtainable in UniZoom.

- **Minimum Pyramid Dimension.** This property controls the smallest tile available in the file. The installed default is 64. Decreasing this value increases the number of tiles in the pyramid file. Increasing this value reduces the number. Generated images smaller than this dimension are scaled down from the smallest tile in the pyramid file.
  - Equilibrium's patented on-the-fly technology is used to dynamically pull and display images on-demand from these files, resulting in very speedy high-quality UniZoom results.
  - The multi-page functionality utilizes a cached version of the original file in the cases of multi-page files and dynamically generates the derivatives on the server side. This, again, could take up additional space to enable this dynamic viewing capability, however, the cost for shared cache disk space is quite low compared to what this enables for the end user.

> *Important:* MediaRich provides for dynamic generation of multi-page images needed on-the-fly, with no pre-processing of those pages. This enables very scalable multi-page viewing without requiring plug-ins on the client browser, or the requirement to constantly pull from the SQL database.

- **PostScript Pyramid Resolution.** This property sets the resolution in DPI for rendering pyramid files for all vector data, including those supported through LibreOffice. The installed default is 300. Decreasing this value lowers the resolution available in UniZoom and reduces the size of the pyramid files. Increasing this value increases the available resolution, while also increasing the size of the pyramid files in the cache.

Additional Properties

There are additional options that can be configured for your organization's specific needs:

- **Reserved Disk Space (GB).** This property has an installed default setting of 5. If the disk usage on the MediaRich server exceeds this value, reduced pyramid files are created. In this case, thumbnails and preview images will be available, but UniZoom will not. If zoom is attempted on an image with a reduced pyramid file, an error page is displayed. The maximum dimension for the reduced images is 300 pixels. If the original is smaller than this it is not counted as reduced and zoom/pan will be available (albeit not so useful). Export is available for all supported images. The export preview, however, will use the reduced pyramid, so if you crop it, the displayed resolution may be less in the preview than in the final exported image. This allows the system to continue to function when disk space becomes limited. Video proxies are limited to 10 seconds.

> *Note:* It is still possible to run out of disk space because MediaRich Visualizer is still caching small files and thumbnails. However, users and administrators should have plenty of warning that the space on the server cache is low.

- **Metadata Extension Assembly.** This property is related to adding additional Event Handlers. This file is found inside the
  `\Program Files\Equilibrium\SharePointConnector\EventChainSample` folder.
- **Metadata Extension Class.** This property is related to adding additional Event Handlers. For more information, see EventChainSample.cs.

Enabling MediaRich Visualizer Functionality for Users

As the administrator, there are configuration tasks that you must complete to enable MediaRich functionality for the users in the SharePoint community. This includes adding users and groups to the administration area and setting permissions.

You can manage MediaRich Visualizer access with definable User Roles that use the SharePoint standard model, without requiring any additional user creation, migration, or management into other systems.

Light Table view

The Light Table View is a replacement for the display previously provided by the MediaRich ImageBrowser WebPart. Many parts of the ImageBrowser WebPart are superseded by improvements to seamless integration throughout the product for SharePoint 2013 and 2016.

To create the Light Table view in SharePoint 2013/2016, use the Asset Library and enable InstantOn™. For more information about the Light Table view, refer to the *MediaRich Visualizer for SharePoint User Guide* see "Using the Light Table View" on page 1.

Adding Users for Properties and MediaCart

Individual users and groups must be added to the MediaRich Administration area to enable them to view and use the visualization capabilities resulting from InstantOn™. Users must also be added to the MediaRich MediaCart workspace to enable access to batch processing of content.

> *Note:* Starting with the 4.3 release, there is no longer any requirement to enable users to have access to the MediaRich Image Workspace (unless you already have Image Workspaces from prior installations).

To access these permissions in SP 2013/2016:

1. Open the page for which you need to grant access.
2. On the left navigation, click **Sites**.
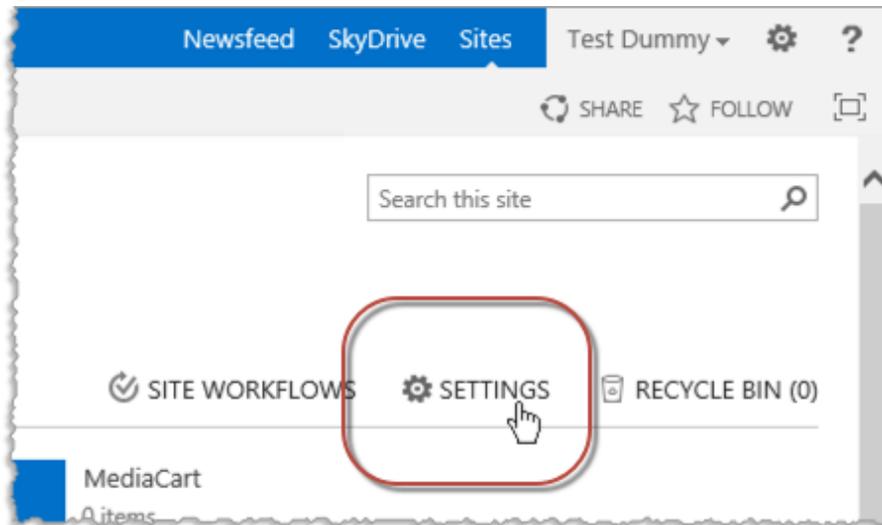3. In the Sites Content page, click **Settings**.

Figure 20: Accessing the site settings

4. In the Site Settings page, locate the **Users and Permissions** and click the **Site permissions** link.

   Note: You should check to see if you need to stop inheriting the permissions from the parent.

5. Click the **Permissions** tab and select **Grant Permissions**.
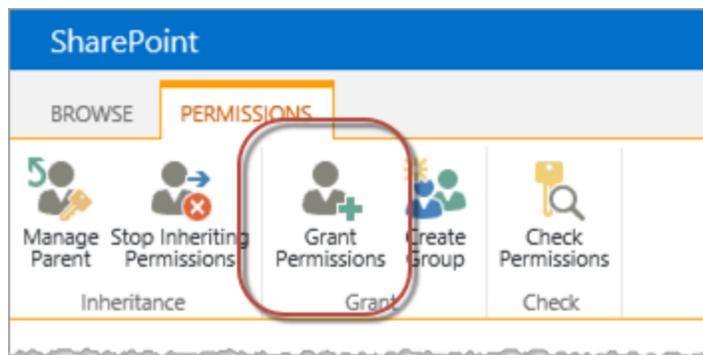

Figure 21: Granting permissions for the site

Administration Workspace

Information workers must have "reader" access to the Administration site in order to read the MediaRich properties required for image processing and other visualization capability access. This site is created by the MediaRich ECM for SharePoint Administration page when the solution is deployed. The location depends on where the MediaRich ECM for SharePoint is deployed, but is usually found at the following URL:

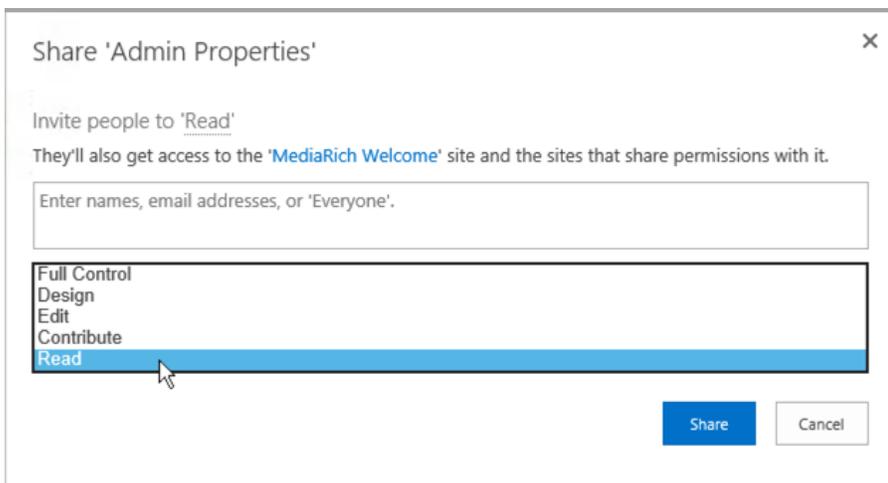http://<SPserver>/sites/MediaRich/MediaRichAdmin/default.aspx

Figure 22: Granting Read access for the Admin Properties

MediaRich MediaCart Workspace

Information workers must have "read" and "contributor" privileges in order to submit a batch to the MediaCart. This site is created by the MediaRich ECM for SharePoint Administration page when the solution is deployed. The location depends on where the MediaRich ECM for SharePoint is deployed, but is usually found at the following URL:

http://<SPserver>/sites/MediaRich/MediaRichCart/default.aspx

You might want to create a special user group called "MediaCart" to grant these permissions only to those users who should have access to MediaRich batch processes.
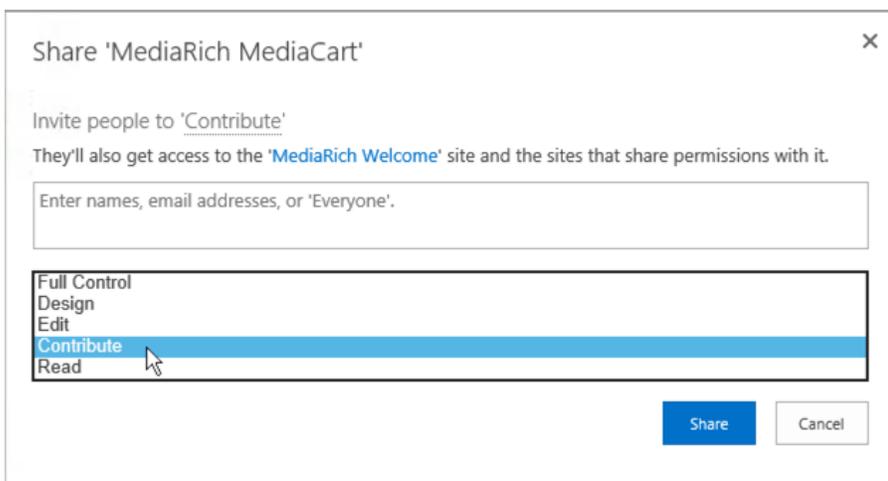

Figure 23: Granting Contribute access for the MediaCart

Permission Configuration

MediaRich ECM for SharePoint uses the implemented SharePoint user and rights management. User groups and roles are supported against configured authentication providers. Within this security model, access rights can be managed down to a single asset level. It is possible to restrict the upload to certain File types, such as avoiding the upload of executable content.

Management of permissions uses an inheritance model, originating from the root site (top site in a site collection) permissions. By default, all child sites will use these permissions (unless the inheritance chain is broken). This is why it is important to carefully design the site permissions from the top down. It is a best practice to use a standard permissions set at the root site and break this inheritance on a limited basis.
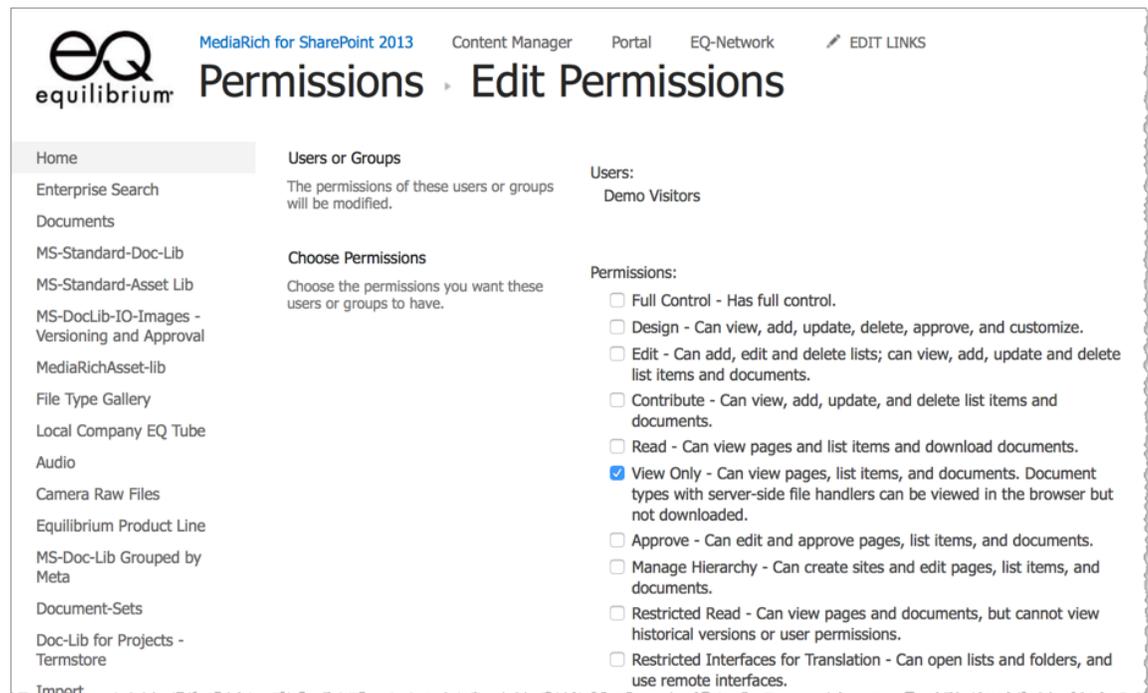

Figure 24: Setting default (root) permissions for a user group

Asset Version Control

The system will use the SharePoint integrated workflows. If versioning and approval is activated within SharePoint, only the creator and site owners will see a non-approved item. If a new item appears, it triggers an approval workflow. The designated approvers will be assigned an approval task and an email will be sent to the notify the approvers. Approval workflows can be executed in serial or in parallel and allow annotations. SharePoint supports customization to achieve more advanced workflows to meet organizational requirements.

Similar to access permissions, the default version control and approval for a document library depends on the site collection template. However, you can configure version control for a document library so that it can best manage the kind of documents in the library.

> *Note:* Each version of a document stores a complete copy in SQL Server. When you configure version control, you should consider what effect this might have on storage space.

Adding Mobile HTML5 Video Support

MediaRich Visualizer for SharePoin offers revolutionary capability to deliver digital video, to nearly all modern devices, platforms and browsers right from within SharePoint 2013 or 2016. Equilibrium's "Auto-Conformance" technology ensures that any user can view the video without any pre-configuration before uploading, or rendition creation eliminating manual work.

HTML5 Mobile Video Playback requires a video-proxy server to be enabled, simple modification of JavaScript (.js) files as well a compliant browser technology, all described in the following sections.

> *Important:* It is not necessary to perform the following tasks if mobile device playback is not required.

To enable the Video Proxy, the following MediaRich Software must be installed:

- MediaRich Server 4.0 or later
- MediaRich Connector 5.0 or later

Support for mobile devices

The Video Proxy is required to support mobile devices such as Windows Phone, iPhone, iPad, and Android devices that cannot authenticate with SharePoint. To provide the HTML5 based Playback support, a Video Proxy Server has to be implemented that serves the Videos for the HTML5 Player. This implementation is not required if your organization does not need to support these types of devices.

Video Proxy Handling

When a video proxy is implemented, this modifies the handling of video requests by the MediaRich server. At the start of a video playback request, the MediaRich Connector requests the Browser Client Type. Based on this client type, it handles the request accordingly:

- If an authentication-capable browser is detected, it launches the standard video player based on HTML5. The authentication takes place and the video playback starts.
- If a browser that does not support authentication, such as an iPhone or iPad browser, is detected, the request is redirected straight to Video Proxy.
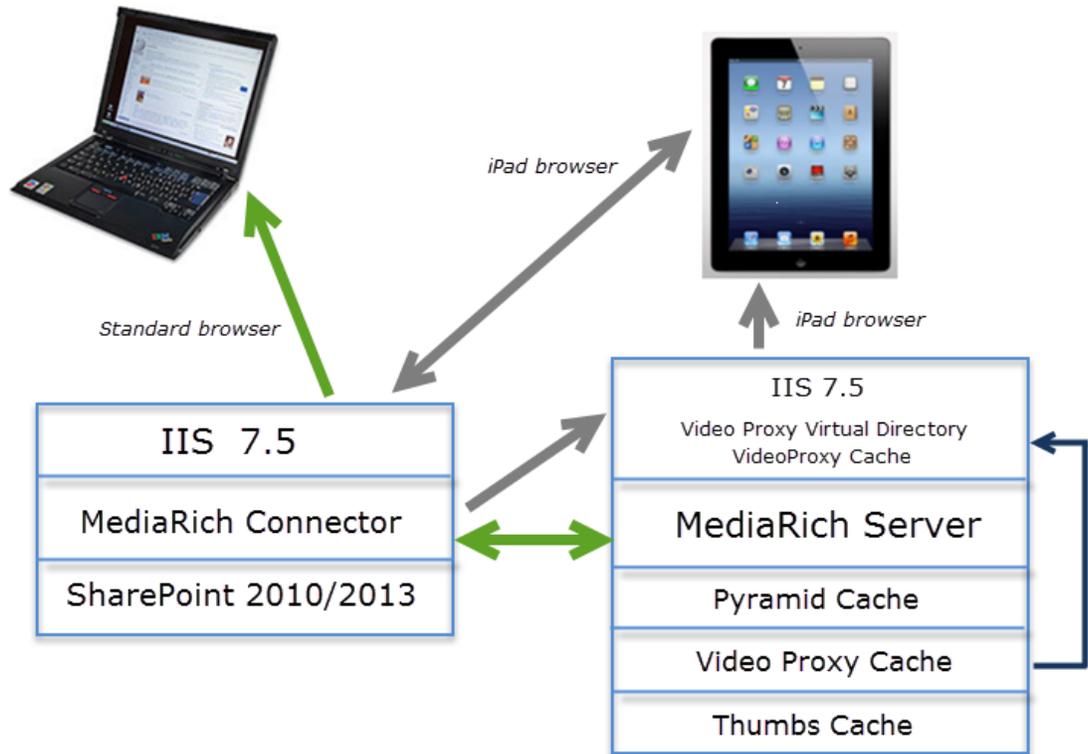
Figure 25: Video proxy architecture

Initially, the user is not yet authenticated for the SharePoint session (non-authenticated access to SharePoint or the stored originals cannot take place) and only the Video Clip Cache files from the MediaRich Server are served. If you want to support playback of the whole Video through the video proxy, the Preview Time in the MediaRich Administration can be set to 0 (zero) for this purpose. You can also set the quality of the Preview Clip in these properties.
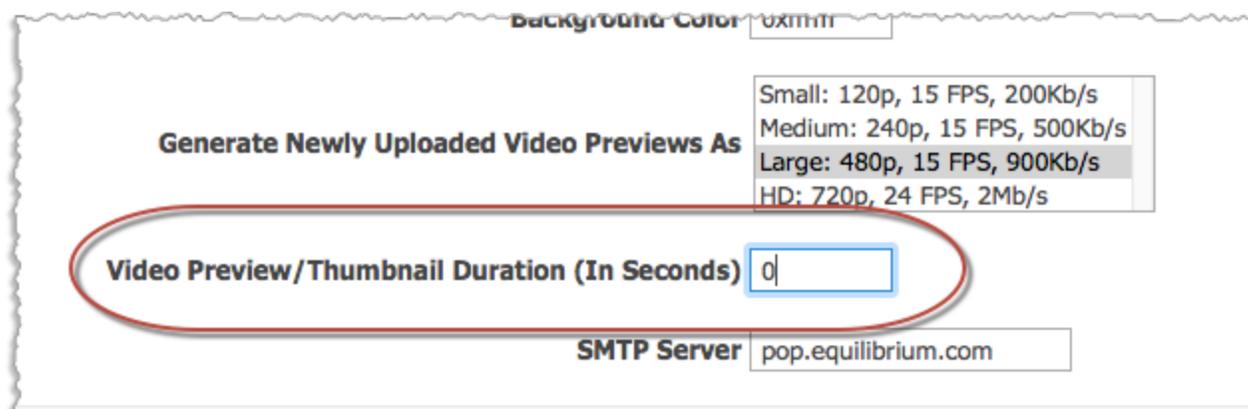

Figure 26: Modifying the video preview duration to support full video proxy playback

Microsoft IIS 7.5 Video Proxy Configuration

Th following information outlines and example implementation using the IIS 7.5 Web Server at the MediaRich Server to operate as the Video Proxy Server. A dedicated Web server could also be used to increase the performance of the System.

To add a video proxy in IIS:

1. Open the IIS Manager at the Video Proxy Web Server.

2. Select the default Website and click **View Virtual Directories**.

3. Right-click the Virtual Directories panel and choose **Add Virtual Directories**.
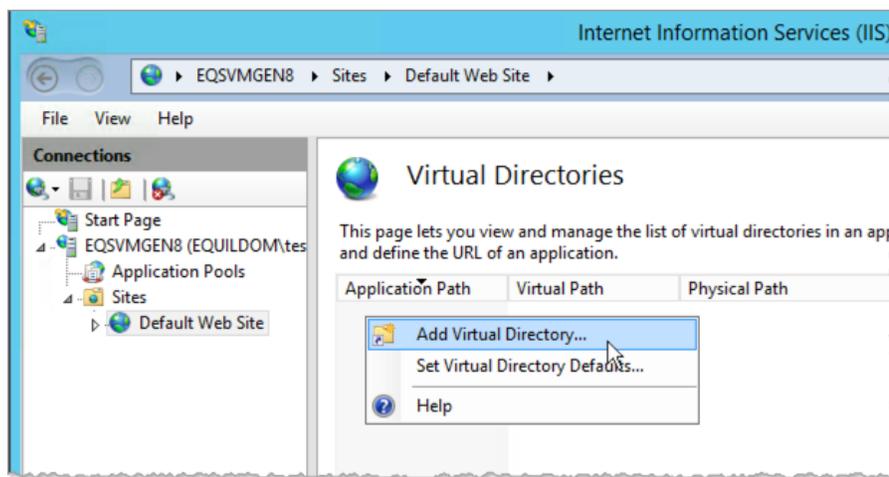

Figure 27: Adding a new virtual directory

4. In the Add Virtual Directory dialog, specify the parameters.

    *   Specify the **Alias**: videoproxy
    *   Enter the **Physical Path**:

    ```
    ..\Equilibrium\MediaRichCore\Shared\Generated\
    MediaCache\VideoProxy
    ```

    The location at the MediaRich Server could differ, depending on your installation.
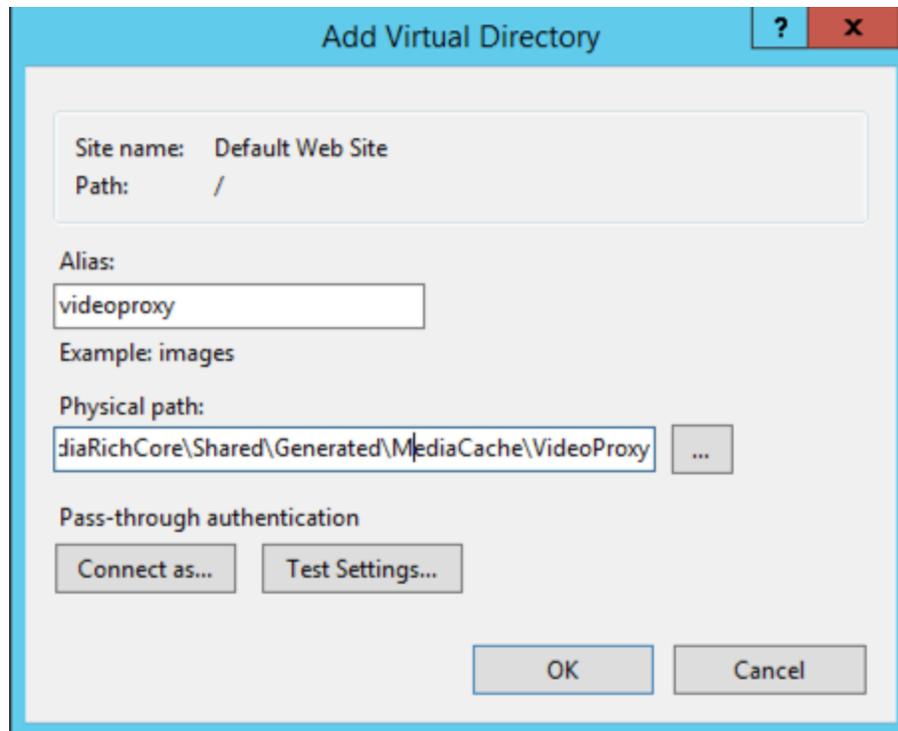
Figure 28: Specifying the virtual directory parameters

5. Click **Connect as** and create a local Proxy User at the MR-Server.

   You can set a specific user (such as "MRProxy"), which needs only read access to the VideoProxy Cache library.
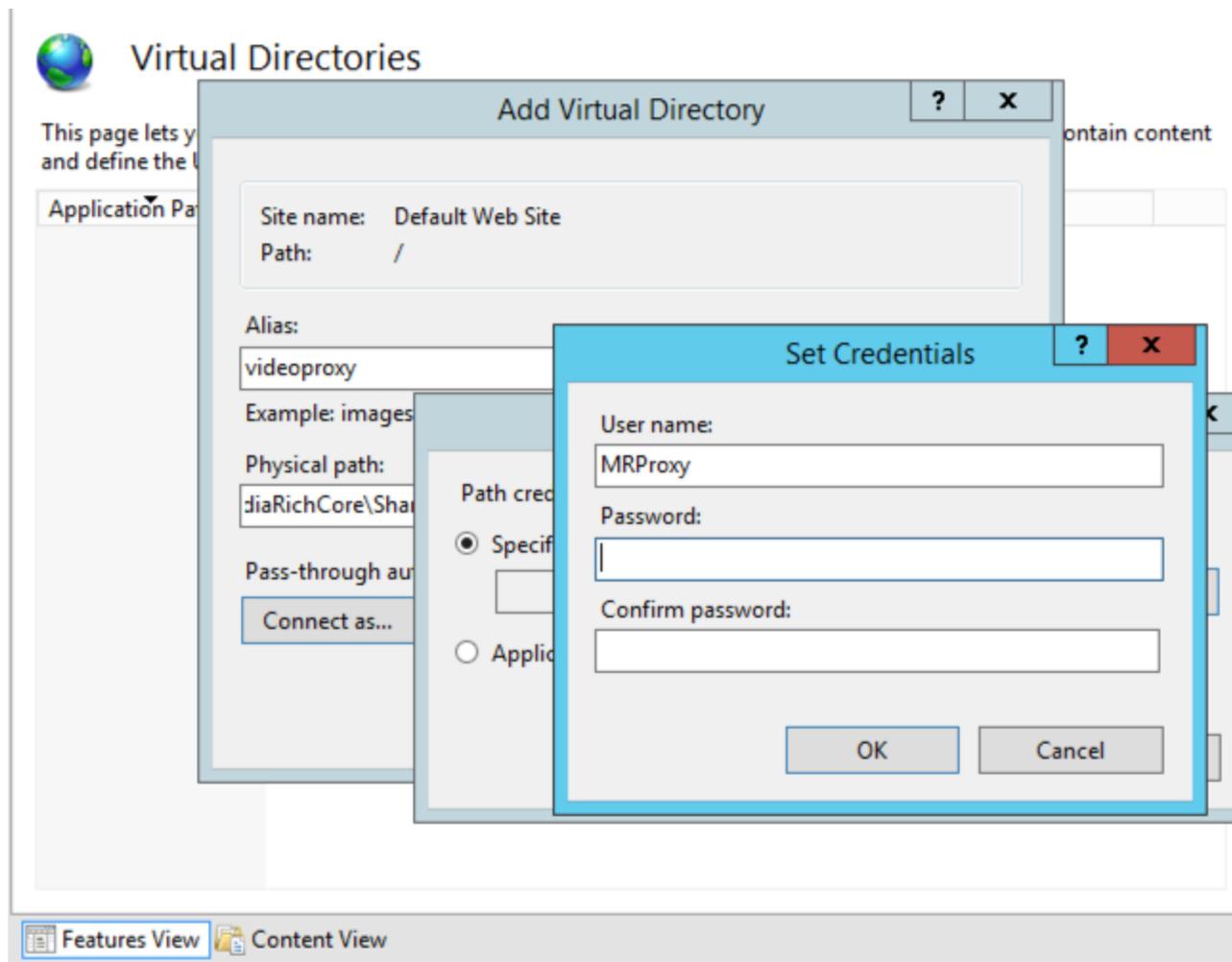
Figure 29: Setting specific user credentials

6. Use Test Settings to verify the access to the Path to the Proxy Cache Files.

7. Click **OK** to create the virtual directory.

Adding MIME Types

Occasionally, you will need configure IIS to accommodate specific file types that aren't supported out of the box, such as MPEG 4 videos.

To add MPEG video to MIME types:

1. Launch the IIS Manager.

2. Right-click the Web application(s) on which you have installed (or will install) the SharePoint Connector.

3. Double-click Mime Types.

Figure 30: Open the MIME Types

4. Review the list of file types.

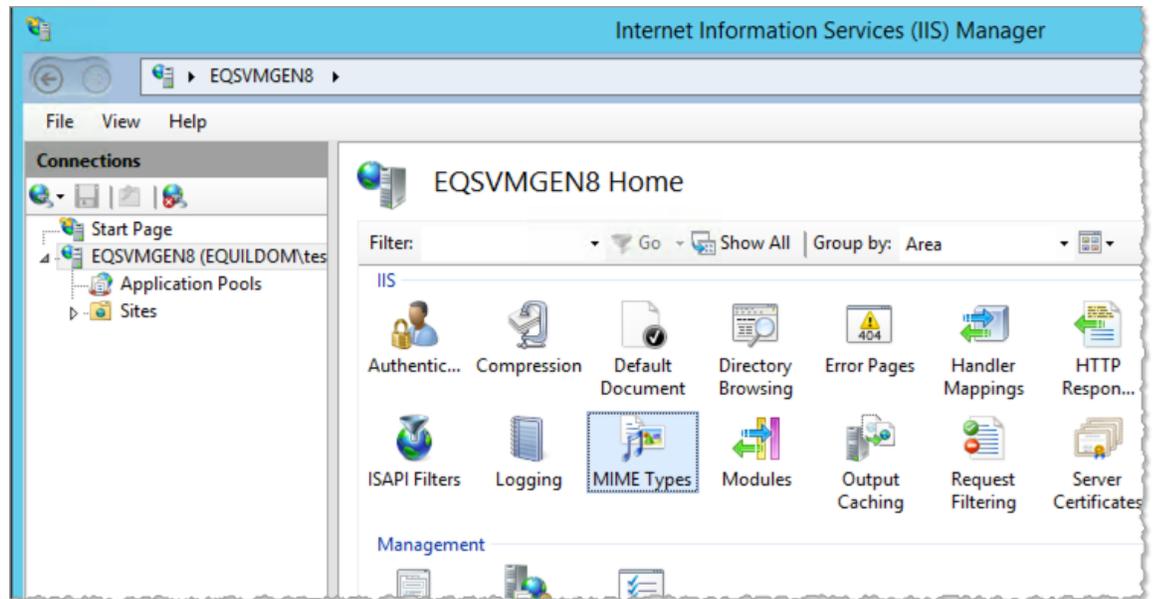   If the file type is not listed, click **Add..** under **Actions**.

5. In the Add MIME Type dialog, enter a file name and extension.

   - Enter the File Name Extension, such as ".mp4".
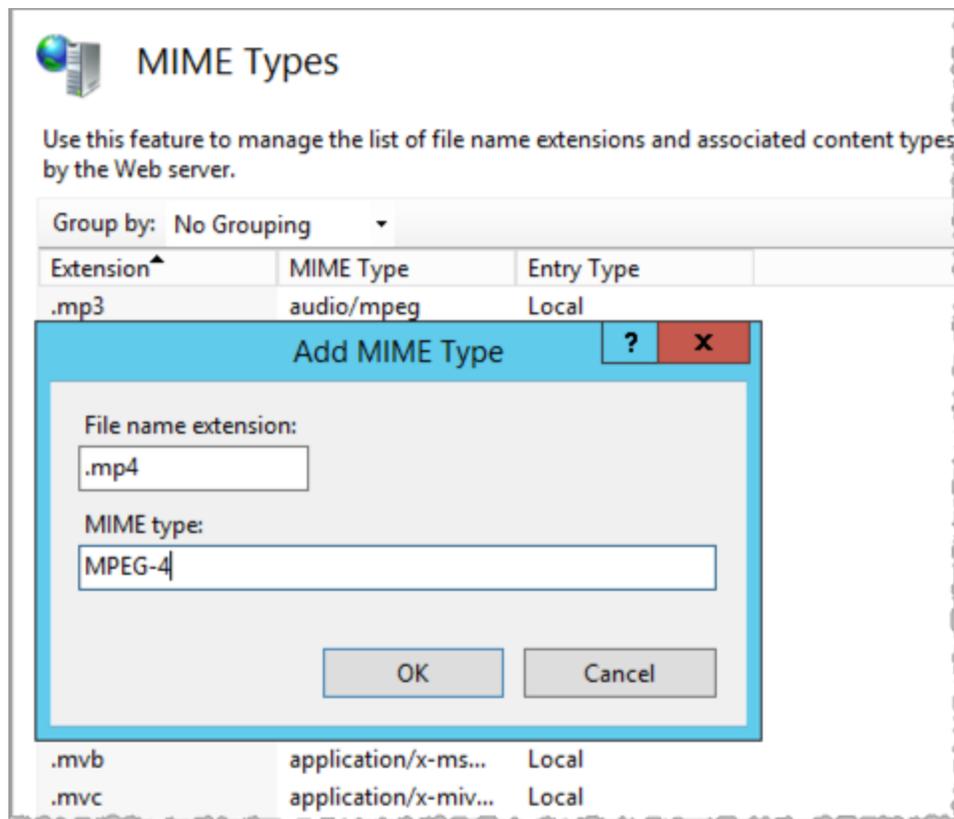   - Enter the MIME Type, such as "MPEG-4".

Figure 31: Adding MIME Types

6. Click **OK**.

Enabling the Video Proxy at the MediaRich for SharePoint Connector

The following configuration file must be modified on each Web front-end server to enable the video proxy:

```
../layouts/MediaRich/Js/viz.js
```

> *Important:* We strongly recommend that you save a copy of this file before you make any edits.

For a default installation location, it can be found at the following path:

```
C:\Program Files\Common Files\Microsoft Shared\Web Server
Extensions\14\TEMPLATE\LAYOUTS\MediaRich\Js
```

You can edit the file in a standard text editor, such as Notepad.

viz.js: The setting that requires editing is at the top of the file. Locate the configuration setting `G_mobileVidServerURL =`. The URL variable should be pointed to the URL of the alias/virtual folder you set up during the IIS Proxy configuration. (No ending / should be used.) For example,

```
G_mobileVidServerURL = "http://w2008r2-f-sql/videoproxy";
```

After you have saved your configuration please run an IIS reset on each Web front-end server.

Redirecting Devices to the Default SharePoint Page

By default, most mobile devices are redirected to the Mobile Pages of SharePoint. To avoid this, you must modify the `compat.browser` file to direct devices to the default pages to make them accessible to these devices, such as the iPhone or iPad. To find this file, look in your IIS directory for your SharePoint site and locate for the App_Browsers folder. Typically, the path would be something similar to the following: `C:\inetpub\wwwroot\wss\VirtualDirectories\80\App_Browsers`

> *Note:* In SharePoint 2013/2016, there other ways to prevent SharePoint from displaying in "mobile view" mode. For example, you can disable it simply by deactivating the mobile feature in Central Administration tool.

This file has settings for many popular browsers, including most mobile browsers. In the following example, you would change the mobile setting for the iPhone browser in this section:

```
<!-- iPhone Safari Browser -->

<!-- sample UA "Mozilla/5.0 (iPhone; U; CPU iPhone OS 2_0 like Mac OS X; ja-jp)
AppleWebKit/525.18.1 (KHTML, like Gecko) Version/3.1.1 Mobile/5A345 Safari/525.20" -->

<browser id="iPhoneSafari" parentID="AppleSafari">
    <identification>   <userAgent match="iPhone" />
        <userAgent match="Mobile" />
    </identification>
    <capabilities>
        <capability name="isMobileDevice" value="false" />
        <capability name="canInitiateVoiceCall" value="true" />
        <capability name="optimumPageWeight" value="1500" />
        <capability name="requiresViewportMetaTag" value="true" />
        <capability name="supportsTouchScreen" value="true" />
        <capability name="telephoneNumberDetectionDisabled" value="true" />
    </capabilities>
</browser>
```

This example illustrates turning off the automatic mobile version of the site for this device by setting the "isMobileDevice" value to "false". When this is set to false and a user browses the SharePoint site form this device, the standard page is returned.

To redirect the iPad to the default Page, locate the settings for the iPad and set the "isMobileDevice" value to "false". You must do this for all devices that you want to redirect to the default page.

Testing the Proxy Server Configuration

If your configuration is successful, you should be able to play the Video when clicking the provided thumbnail within SharePoint. You can test the playback using browsers on devices without SIlverlight support.

Adding Support for Additional File Formats and Uploads

As an administrator, you can expand the "out-of-the-box" support of media files for your SharePoint user community. Depending on the file types and sizes that your users will manage within SharePoint, you can make changes to the MediaRich server and SharePoint configuration.

Support for Office Images

MediaRich Visualizer for SharePoint also provides the ability to read over 200 Office file types. This expands the SharePoint support for these files to create a visual experience for sharing Office files within your organization.

> *Note:* MediaRich Visualizer for SharePoint does not provide support for key Adobe file types (such as PhotoShop, Illustrator, and InDesign) and image export is limited to the original format and JPEG. The full MediaRich ECM for SharePoint product is required to enable full image file format support within SharePoint. See "MediaRich Visualizer Features" on page 8 for a comparison of Visualizer and the full MediaRich ECM for SharePoint product.

For information about this set up and file type support, refer to the following sections of the *MediaRich CORE Installation and Administration Guide*:

- "Enabling Office (LibreOffice) Document Support"
- "LibreOffice Expanded File Formats Supported"
- "Legacy Third-Party File Type Support"

Increasing the Maximum Upload Size

SharePoint 2013/2016 has a default limit of 50 megabytes for file uploads. Because MediaRich will promote your organization's usage of digital assets, you will most likely need to increase this value.

To increase the upload limit:

1. Open the SharePoint Central Administration console.
2. Click **Application Management** > **Manage Web Applications**.
3. In the displayed page, click the web application where you have installed the MediaRich SharePoint Connector.
4. In the tool bar, select the **General Settings**.
5. In the Web Application General Settings dialog, scroll down to the **Maximum Upload Size**.
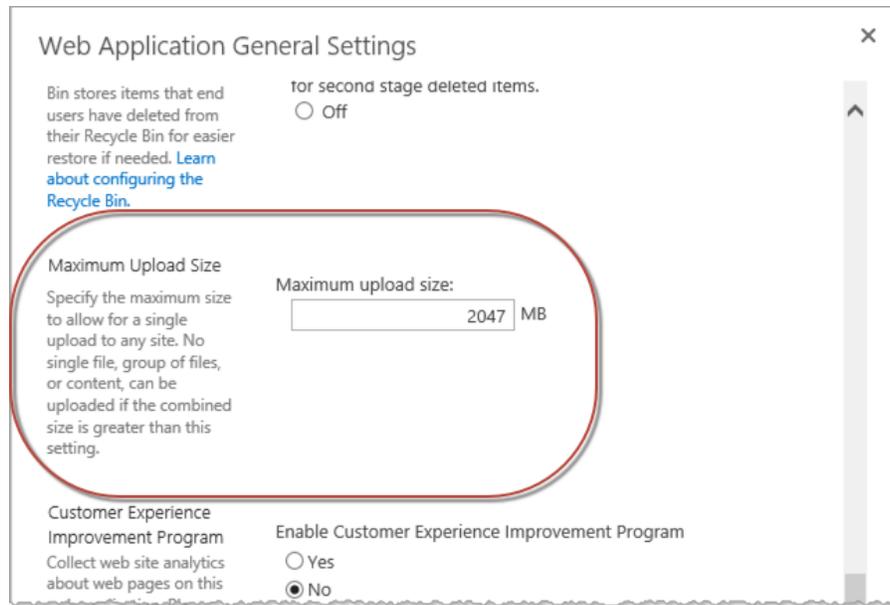
Figure 32: Increasing the file upload sizes

6. Enter a larger value that accommodates rich media.

   You can change this value to any value up to 2047 MB.

7. Close the dialog.

MediaRich ECM Logging

The MediaRich ECM for SharePoint Connector logs activity and errors on the SharePoint server. This information is written to the "MR4SP.log" file located in the `..\LOGS\MR4SP` folder under SharePoint Hive location. You can view this log file in a standard text editor, but the display will be better and the contents easier to decipher in a dedicated log reader program, such as Log4View. MR4SP.log is always the newest file in this folder; previous logs have the date appended to the .log extension ("MR4SP.log.yyyy-mm-dd" - with no other extension).

Activities, timeouts, noncompliance warnings, and other warnings can be found in this log. It is a good place to investigate if MediaRich ECM for SharePoint issues are suspected or have occurred, and it could be required when reporting Technical Support incidents.

Customizing Your Installation

To change the configuration of your MediaRich Visualizer for SharePoint product after installation, you can modify the local properties.

> *Note:* You should limit your customization to those that are outlined in this guide.

For specific details about configuration of the MediaRich server, refer to the *MediaRich CORE Installation and Administration Guide*.

> *Important:* Do not make changes to the MediaRich Document content type using Microsoft's web interfaces (or otherwise). If customizations are required, create a new content type that inherits from the MediaRich Document content type and make changes to the new sub type.

Chapter summary

Modifying Local Properties Files

Many aspects of MediaRich ECM for SharePoint are controlled by the properties file (`MediaRichCore/Properties/local.properties`) on the MediaRich CORE server machine.

The MediaRich CORE Administration tool (or administration utility) provides an easy way to edit properties; using the tool also modifies the text file. Refer to Viewing and Modifying the Local Properties in the *MediaRich CORE Installation and Administration Guide* for more information.

> *Note:* Changes to properties do not take effect until you restart the MediaRich CORE Server or the MediaGenerator Service.

Moving the BatchOut Folder

To change the location of the BatchOut folder, you must modify the `virtualfilesystem.batchout` entry in the `local.properties` file (or use the administration utility). This entry creates the batchout file system. This is the root folder where batch processing output is stored.

If this folder is a network share, the location can be specified using a UNC path.

Text editor: Enter the location in the local.properties file (backslashes must be doubled), similar to the following: `\\\\server\\sharedfolder`.

Administration utility: Specify the location as a standard file directory, such as the following: `\\server\folder`.

> *Important:* You must restart the MediaRich Server for changes to the properties file to take effect.

Moving the Pyramid Cache Folder

The pyramid files are the files that are cached so that they can be called by the UniZoom feature to provide users with the ability to view images and documents with amazing detail. In some instances, you might need to change the location of the Pyramid Cache Folder from the default.

To change the location of the Pyramid Cache folder, you must modify the `virtualfilesystem.pyramid` entry in the `local.properties` file using a text editor or the administration utility. This entry creates the pyramid file system. This is the root folder where pyramid files are cached. Pyramid files are multi-resolution image files that are used to support features like thumbnailing and UniZoom. If you change your Pyramid Cache Folder after media is already uploaded to your document libraries, you must copy the cache to the new location or run the DocLibWalker tool (see).

The guidelines for setting the Pyramid Cache path are similar to those for the BatchOut path.

Configuring Batch Output Behavior

The batch processing options that are available to a user in the MediaCart are described by an XML-based protocol in which the script parameters can be easily be edited.

The following attributes are definable for each parameter:

- The name of the parameter
- The input method for the parameter (Text Box, Checkbox, Popup Menu)
- For a pop-up menu, the list of values to be displayed
- For a text box, entry validation (numeric range, min/max length, etc.)
- The default value of the parameter

You can access these XML descriptions in the `\MediaRichCore\Originals\Scripts\Batch\Output` directory on the MediaRich Server. Specifically, the batch output behavior is configurable via the `BatchOut.msd` xml file.

Modify the menu item and parameters to control batch output behavior:

```
<Mediascript>
    <DescVersion>1.0</DescVersion>
    <Name>Batch Out Packager</Name>
    <Interface>
        <MenuItem>Store Results In MediaRich BatchOut</MenuItem>
        <MenuValue>BatchOut</MenuValue>
        <Params>
            <Param>
                <Name>CreateZip</Name>
                <Label>Create A Zip File</Label>
                <Type>YesNoDropDown</Type>
                <Default>No</Default>
                <Hidden>false</Hidden>
            </Param>
            <Param>
                <Name>Overwrite</Name>
                <Label>Overwrite Previous Results</Label>
                <Type>YesNoDropDown</Type>
                <Default>No</Default>
                <Hidden>false</Hidden>
            </Param>
        </Params>
    </Interface>
</Mediascript>
```

> *Note:* Define the default value for each advanced batch option type individually.

There are additional XML files with the "msd" extension that allow administrators to control the following:

- Email notification
- Common user interface elements
- The location for Batch Results back into a SharePoint document library

Configuring Search for MediaRich ECM

The following sections describe how MediaRich ECM for SharePoint works with the search technologies available to SharePoint 2013 and 2016.

SharePoint 2013/2016 Search is the default search service that can be activated when a SharePoint farm is installed. Standard search can be extended to include "Advanced Search" capabilities, which provide search of specific metadata fields. SharePoint can also be configured for Microsoft Enterprise Search, which combines SharePoint with Microsoft FAST Search technology.

> *Important:* SharePoint provides many ways to customize its list views. When using these customization settings, make sure that you **do not remove or disable** the elements upon which MediaRich Visualizer for SharePoint relies. For example, it is important that you do not move or remove the "Type" (icon linked to document) and "Name" (linked to document with edit menu) fields in the "Edit View" web interface (ViewEdit.aspx), which are displayed for each item by default.

Advanced SharePoint Search

Out of the box, SharePoint provides the capability of searching for content (and filenames, etc.) with built-in SharePoint search technology. With configuration of managed properties on content sources and the addition of an advanced search web part, an organization can search for specific metadata fields. Thus, users will have the power to perform focused searches on MediaRich metadata fields (such as "Art Director").

FAST/Enterprise Search for SharePoint

FAST Search for SharePoint is a search technology that requires a custom configuration. In more recent SharePoint releases, this has been merged into additional functionality and is now called *Enterprise Search*. As with the Advanced SharePoint search, the Enterprise Search can be configured to take full advantage of the MediaRich custom content types. The setup tasks for Advanced Search and Enterprise Search are similar, but not identical—you should follow the procedure that is appropriate to your chosen search technology.

Configuring Advanced Search for SharePoint 2013/2016

There are specific tasks required to enable the visualization of search results in basic or Enterprise Search Center. These are additional steps after you make the Enterprise Search Center available to

your SharePoint 2013/2016 Environment. Typically, these tasks are required only once for each advanced search web part.

Creating a Document Library

If you have created a new site collection to host the Enterprise Search Center, you must add a Document Library and enable InstantOn™. If you already have a Document Library with InstantOn activated, this task is not necessary.

To create a new document library:

1. Go to the root of the site.

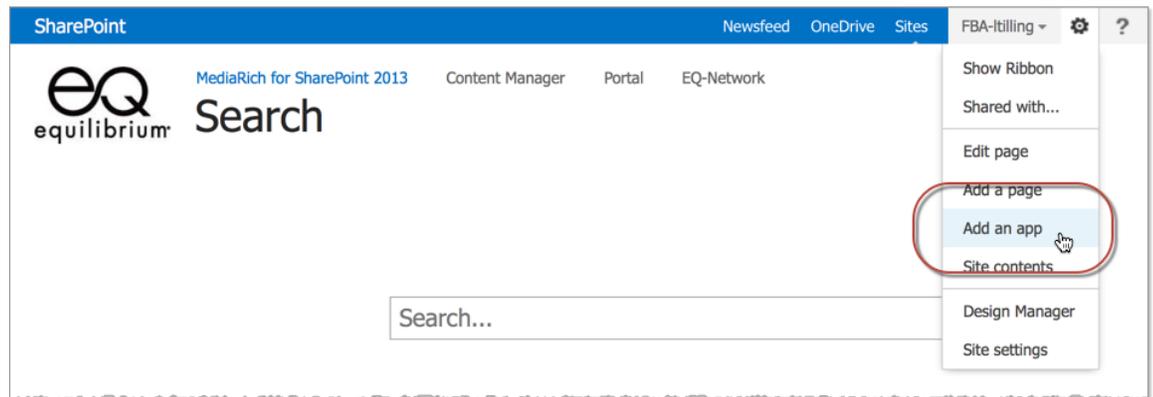2. Click the Gear icon and choose **Add an app**.

Figure 33: Adding an app

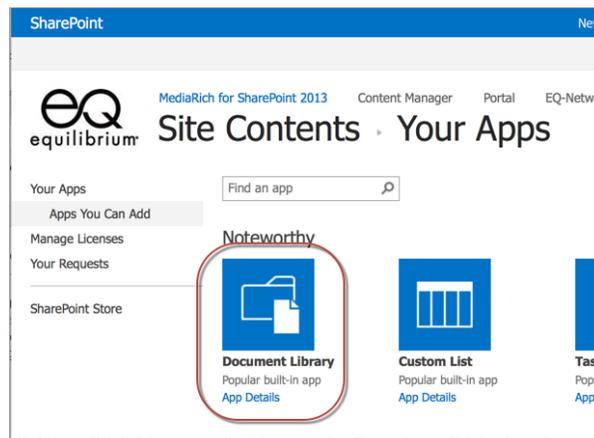3. Select Document Library.

Figure 34: Choosing the Document Library app

4. In the Adding Document Library dialog, enter a **Name** for the new document library, such as "InstantOn".
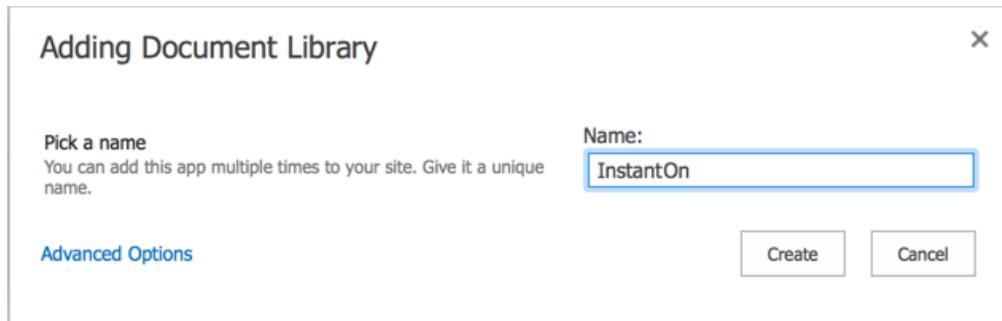
Figure 35: Creating the new library

5. Click **Create** to create the new library.

   In the site page the new document library item is displayed.

6. Place the pointer over the new item to enable the ellipsis and click it to open a pop-up details page.

Figure 36: Accessing details for the new library

7. Click **Settings** to display the Settings page for the library.

8. From here you can select the **MediaRich settings** and enable InstantOn for the document library.

   For more information, see "Basic InstantOn Activation" on page 58.

Setting Up the Enhanced Search

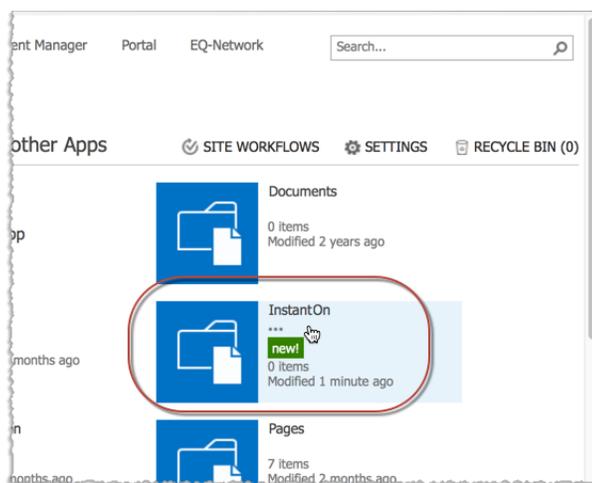When you have one or more document libraries with InstantOn activated, you can access a results page from the Advanced Search function and then edit the web parts.

To modify the web parts on the search results page:

1. Open the Enterprise advanced Search Page and start a search to display the Results Page.
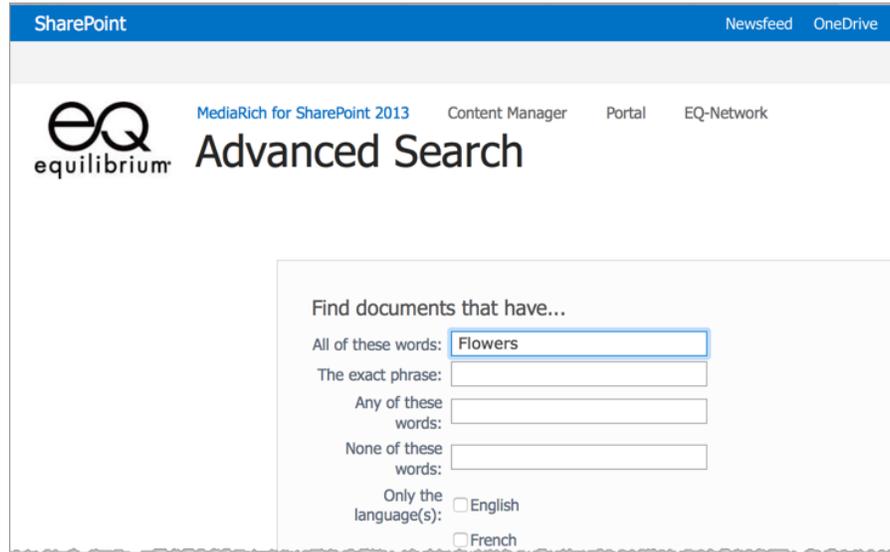
Figure 37: Accessing details for the new library

2. When the result Page is displayed (results.aspx), click the Gear icon and choose **Edit page**.
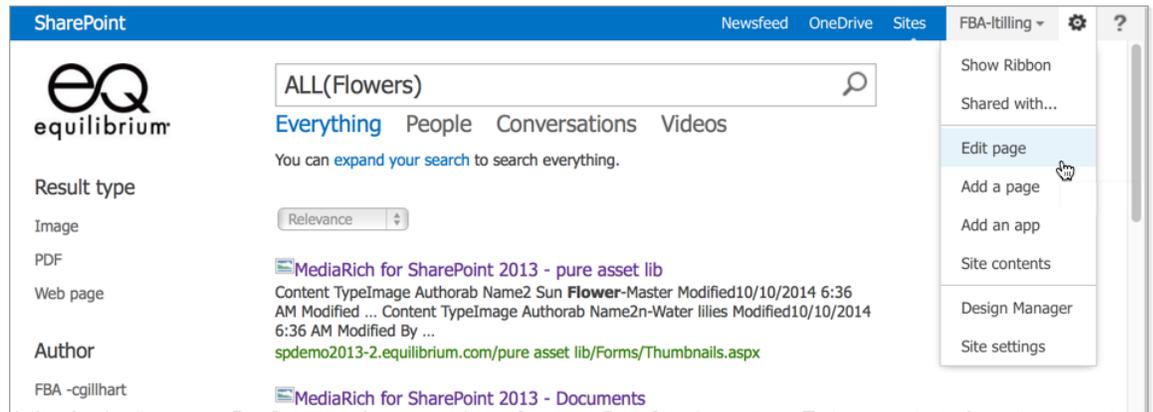
Figure 38: Editing the search results page

This displays the Results page and web parts. This page is automatically checked out.

3. Click the **Search Results** web part

4. Click the small arrow in the upper-right corner of the Web Part and choose **Edit Web Part**.
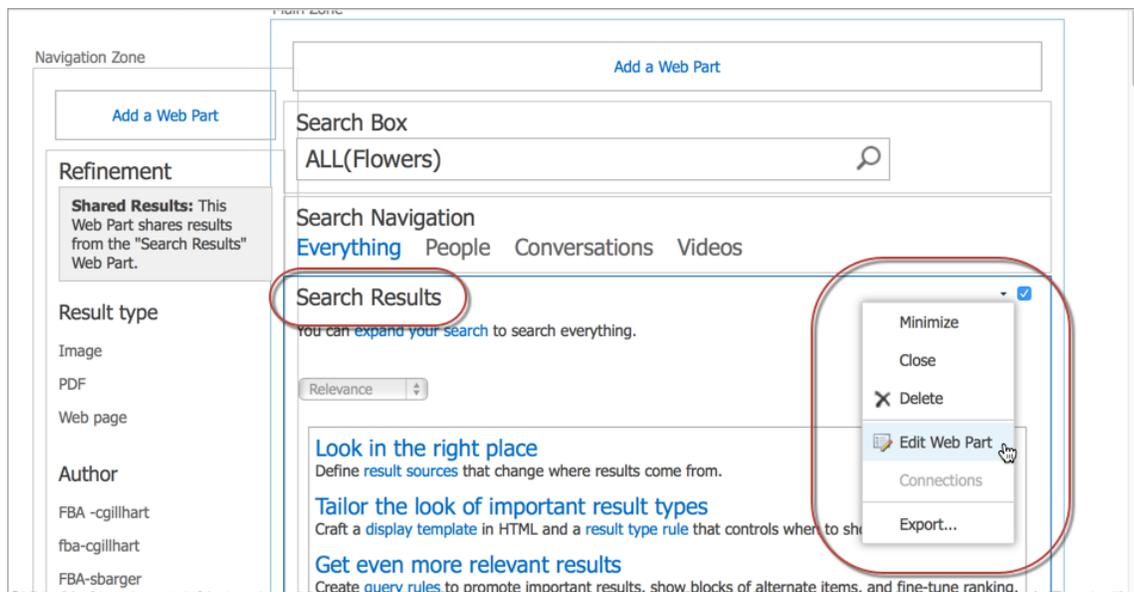
Figure 39: Editing the web part

5. Modify the Search Results web part.

    •   In the web part properties, expand **Display Templates**.

    •   Choose **MediaRich Default Result**.
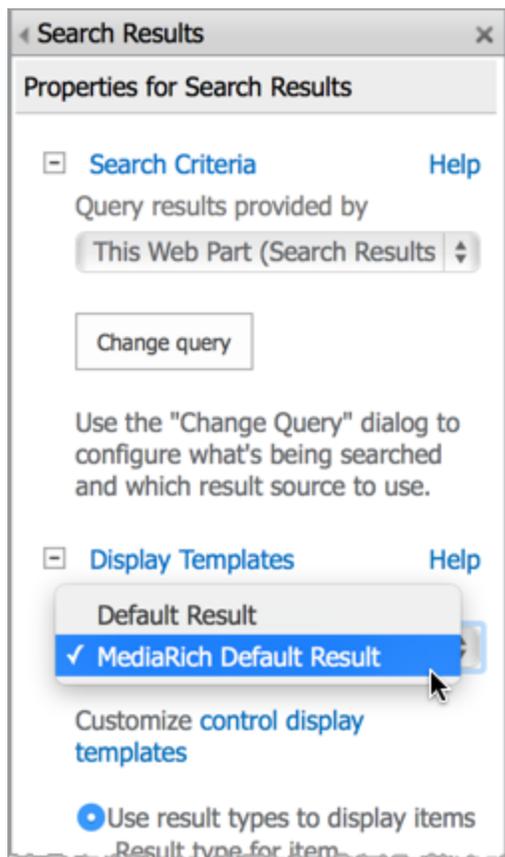
Figure 40: Changing the display template

- Click **OK** at the bottom of the properties panel to save your settings.
- Check in the web part to make the changes visible to all users.

6. Check in the Results page to make changes available to users.

Adding MediaRich Search Types to the Advanced Search Page

To search within particular Columns of the MediaRich Content Type you may want to add additional Search Types to the XML that defines the Content of the advanced Search Page.

To add a search type:

1. Return to the Advanced Search page.

2. Click the Gear icon and choose **Edit page**.
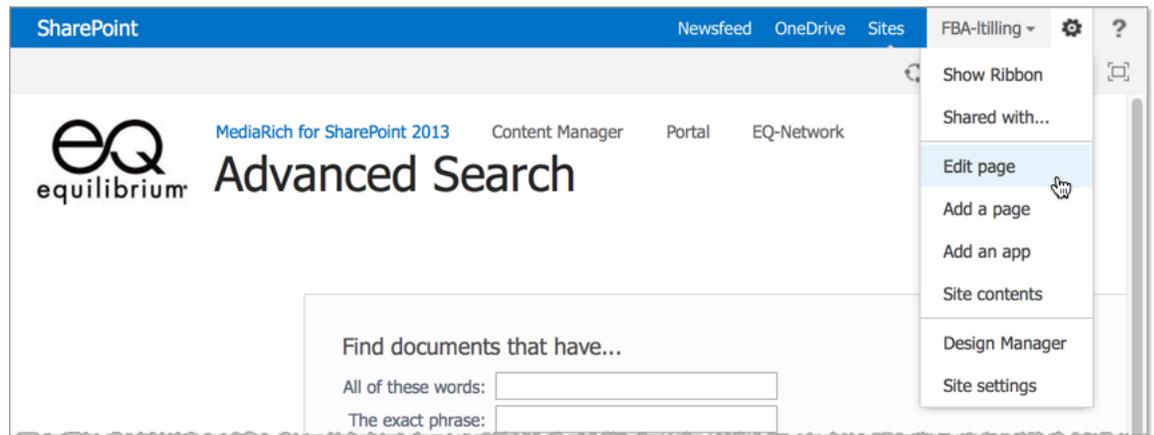
Figure 41: Editing the Advanced Search page

3. Click the **Advanced Search Box** web part

4. Click the small arrow in the upper-right corner of the web part and choose **Edit Web Part**.
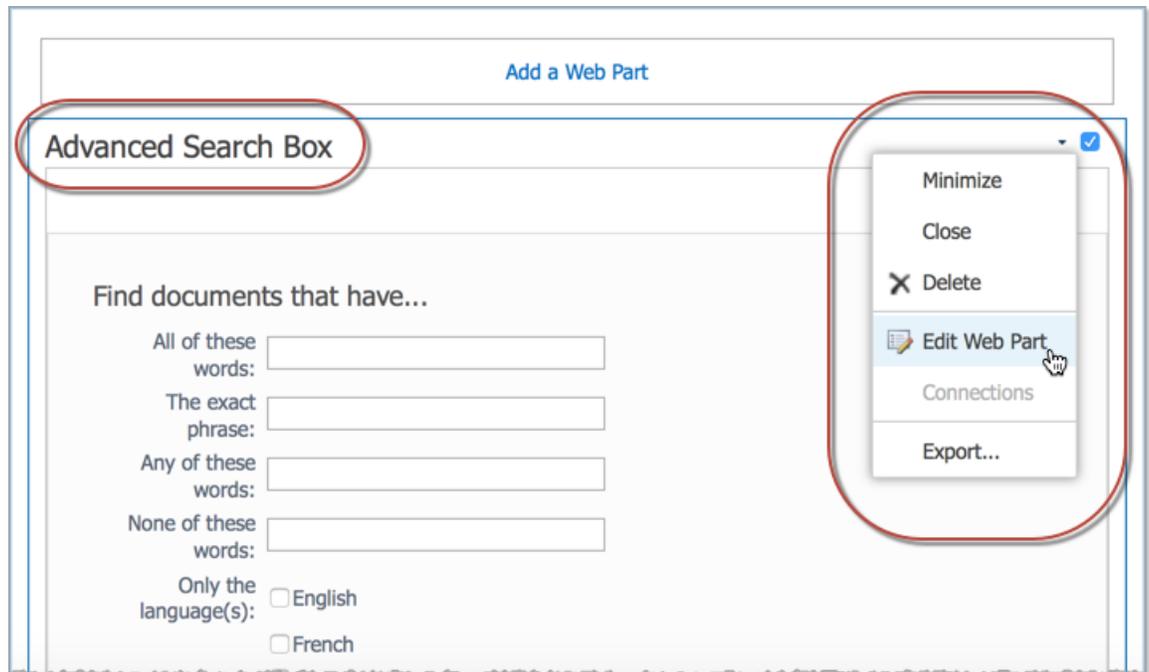
Figure 42: Editing the web part

5. Modify the Advanced Search Box web part definition.

- In the panel, expand the **Properties** item.

- Click the **…** button to edit the XML.

  A dialog with a text area containing an XML document appears. You can edit the XML in the dialog, or copy the text from the dialog and paste it into a text or XML editor. If you paste it into a plain text editor, you'll need one that can reformat XML into a readable form.
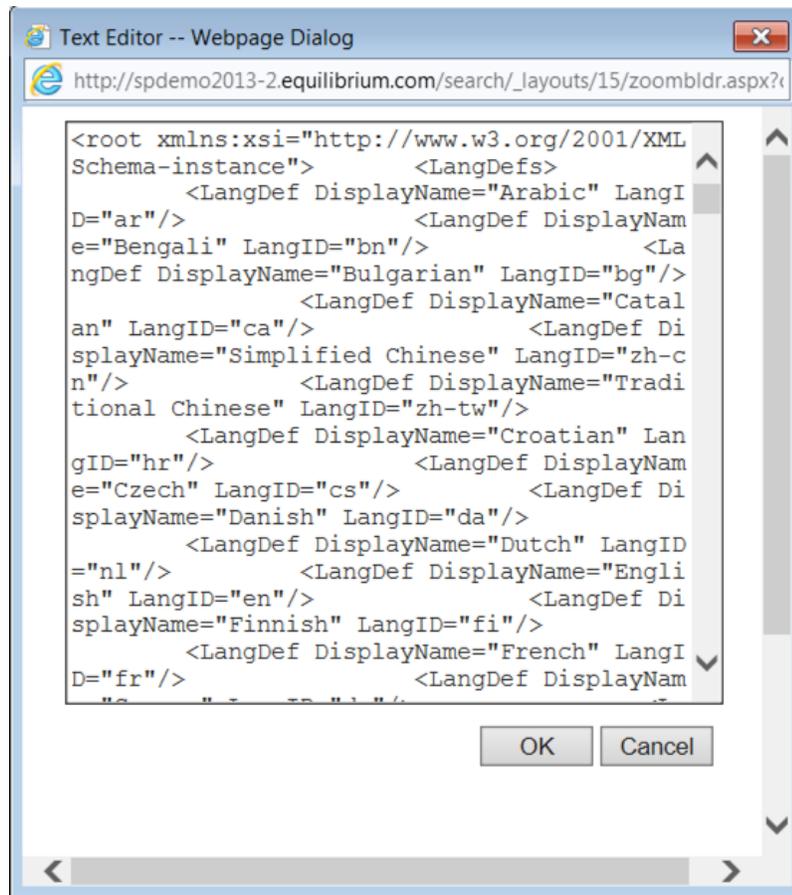
Figure 43: Editing the Advanced Search page

> Add the lines of XML to the bottom of the existing block named <PropertyD efs> (after first checking for existing <PropertyDef> elements with the same name).
>
> Use the content in the following file:
> ```
> ..\Equilibrium\SharePointConnector\Advanced SearchProperties.xml
> ```

Important: Make sure to make a copy of the existing and save the original settings as a backup before you make changes.

- Click **OK** to save your changes to the XML.

6. Click **Apply** to apply your settings.

7. Click **OK** to save the changes to the web part.

8. Check in the web part changes.

9. Publish the draft to make the changes available to users.

When this process is complete, the new MediaRich Search Types are available in the Advanced Search.
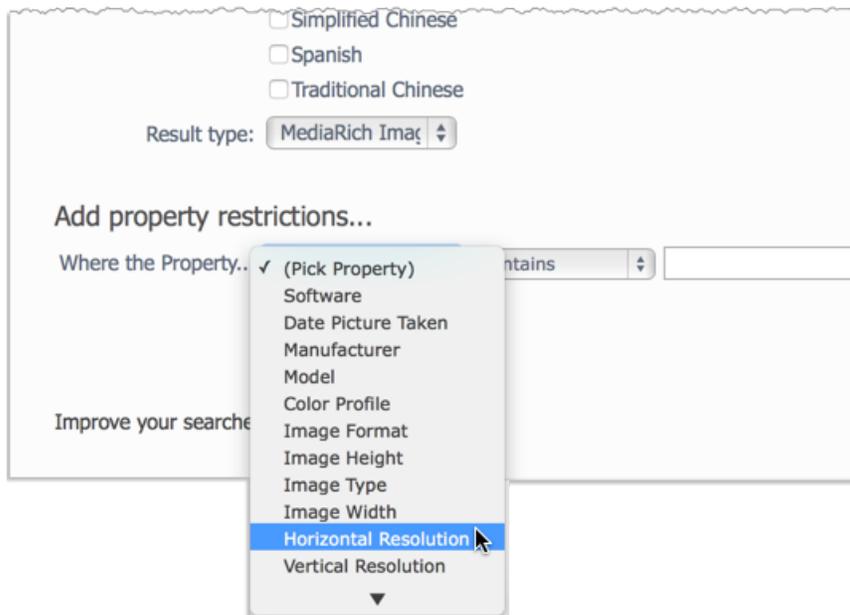
Figure 44: Accessing the MediaRich search type and properties in the Advanced Search page

Metadata and File Uploads

The individual fields that are overwritten by the metadata in a file when you upload a file with the same name are specified in metadataDefinitions.ms. This file is located inside the C:\Program Files (x86)\Equilibrium\MediaRichCore\Shared\Originals\Scripts\SharePoint folder on the MediaRich Visualizer for SharePoint Server installation.

Each supported metadata field has a definition in this file. Each of these definitions contains a "preserve" flag. Setting the preserve flag to "true" causes metadata load not to send values for that field to SharePoint on ingest. By default, fields that are user-editable in SharePoint have this flag set to "true." All other fields have the flag set to "false." This means that when you overwrite an existing file, the image information and camera information will be updated to reflect the new image, but fields like title, author, etc., will not.

The format for each entry in metadataDefinitions.ms is as follows:

```
// Each array element contains an object with the following parameters:
// tagName - the xml element name
// preserve - true to preserve values on update, false to overwrite
// get - method for getting the element.
// put - method for setting the element. For writeable fields only.
// fmt - one of "date", "psdate", "dcdate", "string", "multi-string"
```

Refer to the metadataDefinitions.ms script for more details.

Adding Asset-Processing Tasks

MediaRich Visualizer for SharePoint allows users to easily perform image-transformations on media stored in SharePoint 2013 and 2016 document libraries. Users can choose from an array of media-conversion scripts using either the Export functionality in a MediaRich-enabled library or the MediaCart interface for batch processing.

Users can do this by choosing an option from the Select Operation menu in the user interface for the operation. Each item shown in these menus represents a single script file on the MediaRich Server. When the operation is performed, the selected script is executed on the MediaRich Server to transform the images. Both interfaces can be extended by adding new MediaScripts. The following sections provide more information about adding image-processing tasks.

Adding a New Export or Batch Task

The MediaRich scripts that define the Export and Batch processing tasks are found in a pair of directories named Export and Batch, respectively. These directories are found in the following locations on the MediaRich server:

```
MediaRichCore\Shared\Originals\Scripts\SharePoint\Export
MediaRichCore\Shared\Originals\Scripts\SharePoint\Batch
```

To add a new task, create a text file in the appropriate directory. Give the new file the name you want to have appear in the menu plus a file extension of ".ms". For example, to add an export operation named "Rotate Image 90 Degrees", you would create the following file:

```
...\Scripts\SharePoint\Export\Rotate Image 90 Degrees.ms
```

If you remove a task (remove a MediaScipt .ms file), this will cause the task to not appear.

Defining the New Task

To define the operation that a script performs, edit the script file using a text editor. Either Notepad or WordPad should work fine for this task. The format of an Export or Batch task script is as follows:

```
function processImage(img)
{
 <image operations>
 return img;
}
```

The script contains a single function named `processImage`, which takes a single argument. That argument is a Media object that contains the image to be processed. The function must return a Media object containing a single image. The function may perform any MediaScript operations applicable for the given task to produce the resulting image.

For example, the "Rotate Image 90 Degrees" script might look like the following:

```
function processImage(img)
{
 image.rotate(angle @ 90);
 return img;
}
```

You can use any of the existing scripts in the Export and Batch directories as examples in creating hese scripts. For more information about writing MediaScript scripts, see the *MediaRich CORE Programmer's Guide*. For details about the operations that can be performed on a Media object, see the "Media Object" section of that document.

Disabling the Batch Upload Feature

There could be some situations where you want to disable the MediaRich Batch Uploader. This is done by disabling a SharePoint feature.

To disable the batch uploader:

1. Navigate to the Site Collection homepage.

2. In the upper right drop-down menu labeled Site Actions, select Site Settings.
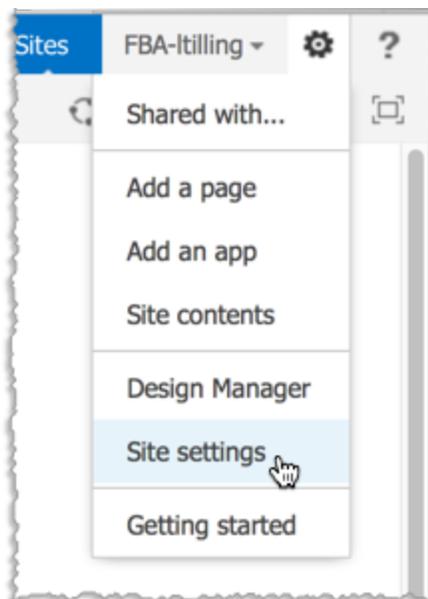
Figure 45: Site Settings

3. In the Site Administration column, select **Manage Site Features**.
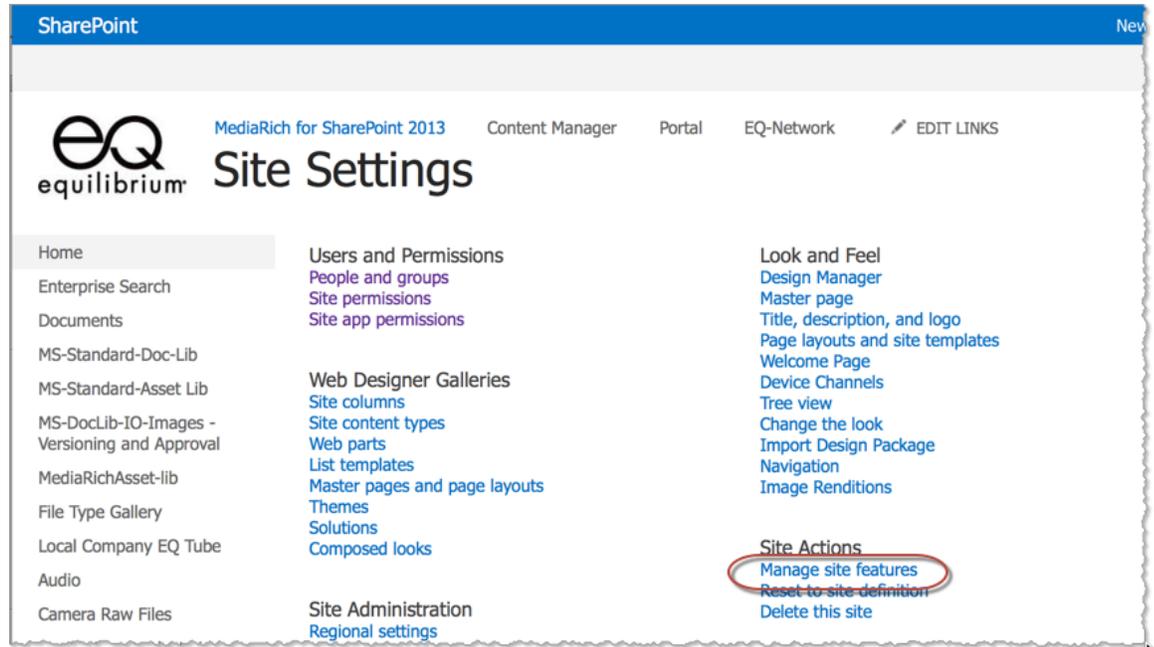
Figure 46: Manage Site Features

4. Scroll down to the Media Batch Uploader and click the **Deactivate** button.
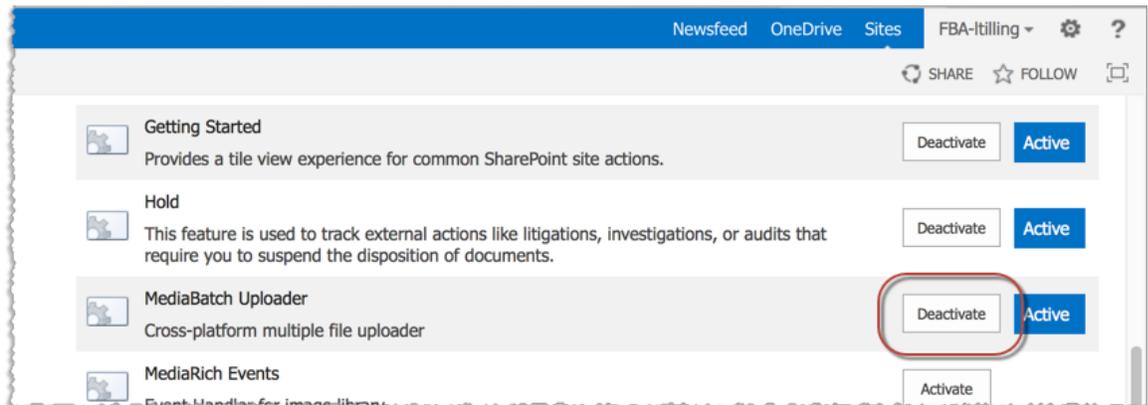
Figure 47: Deactivate Feature

Customizing Export and Batch Operations for Video

The scripts and settings files for operating on videos stored in SharePoint InstantOn™ libraries are located on the MediaRich Core Server. These locations might be slightly different depending on where the MediaRich server was installed; however, the folder locations are typically the following:

The video export scripts:

```
C:\Program Files
(x86)\Equilibrium\MediaRichCore\Shared\Originals\Scripts\SharePoint\VideoExport
```

The video batch scripts:

```
C:\Program Files
(x86)\Equilibrium\MediaRichCore\Shared\Originals\Scripts\SharePoint\VideoBatch
```

The video settings files (used in both export and batch operations):

```
C:\Program Files
(x86)\Equilibrium\MediaRichCore\Shared\Originals\Media\SharePoint\TranscodeSettingsFi
les
```

You will notice the VideoExport and VideoBatch folders also contain "de", "fr", and "nl" subfolders. These contained localized versions of the scripts. They are identical in functionality, but some of their filenames are in the corresponding language. For each English script, there is a corresponding localized version in each of these subfolders. If you add scripts to the main folder or one of these subfolders, you should add a localized version to the other folders so users who switch languages will see the scripts in their selected language. If the script is missing for a particular language, it will not be present in the list of available operations that can be applied to the video.

In order to add a new script operation, simply create a new script, give it an extension of ".ms", and place it into the VideoExport or VideoBatch folder, and in the localized subfolders. Then you should restart the MediaRich server and SharePoint server so that the directory is rescanned and the new script names are added to the global list of available video operations.

For detailed instructions for creating MediaScripts, refer to the *MediaRich CORE Programmer's Guide* installed with the MediaRich server. You can also use the existing video scripts as a starting point for creating customized versions.

Creating Custom Settings files for Video Batch and Export

The procedure is the same for creating custom settings files for MediaRich Core video Hot folders and video processing. You can access these settings directly from the MediaRich Properties Editor by clicking the **Create New Export/MediaBatch Video Settings**.
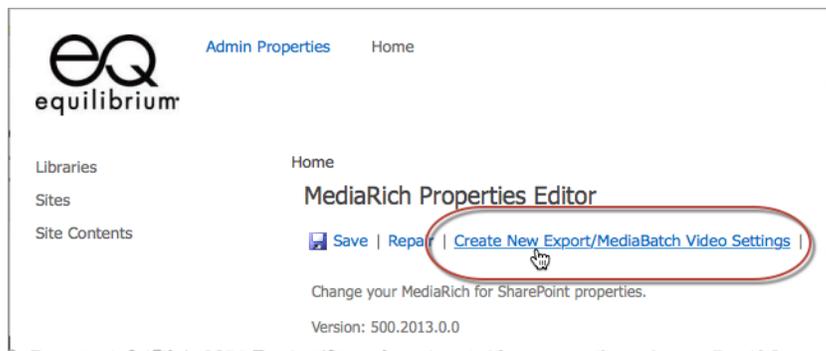
Figure 48: Accessing the MediaBatch Video Settings from SharePoint

You can use the AV Settings utility to create new settings files. If you choose to download the file, your web browser download handles downloading and saving the file on your local system. To use this file within your MediaRich Visualizer environment, you must move the file to the TranscodeSettingsFiles folder and restart both the MediaRich Server and SharePoint server to load the new settings names into memory.

If you save the new settings as a preset, it will automatically be listed in the Export and MediaBatch settings. This is the preferred method of adding settings to MediaRich Visualizer.
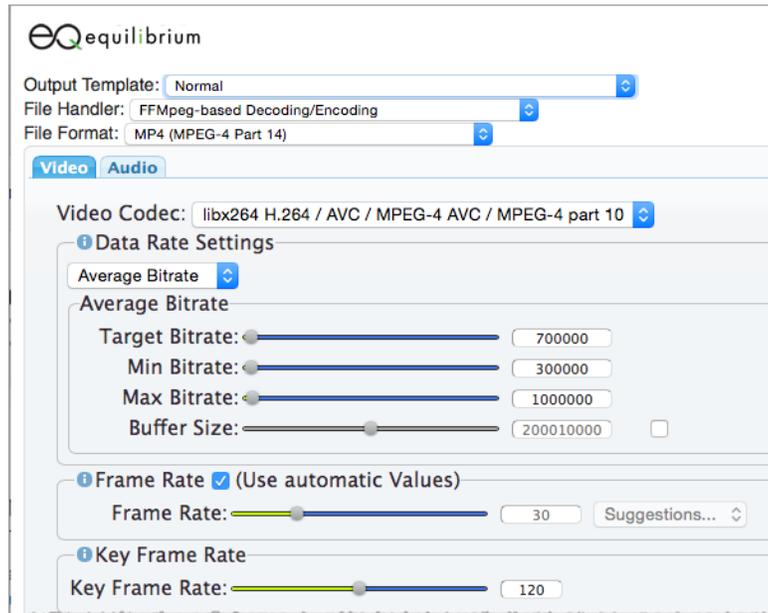
Figure 49: The Video Settings utility

For more information about using this tool to create custom video settings, refer to the "Creating Compression Settings Files" section of the *MediaRich CORE Programmer's Guide*.

Adding Support for Localization

MediaRich Visualizer for SharePoint 4.3 was the first version to offer multi-language support. Your multi-national organization can deliver rich content in both Document Libraries and Asset Libraries in French, German, Dutch, English, and Arabic. All components of MediaRich Visualizer for SharePoint now work in multiple languages and are installed this way by default.

Localization for MediaRich Visualizer for SharePoint requires that the appropriate language packs have already been installed. To see further information regarding Multi-Lingual Interface features in SharePoint, refer to the following Microsoft TechNet Article:

http://technet.microsoft.com/en-us/library/ff805062.aspx

Upon completion of the setup procedure for the multi-lingual interface capabilities in SharePoint, and after selecting the availability of languages in the Language Settings, any user in SharePoint can select their own default language.

Localization Settings

For SharePoint 2013, users can add language preferences in their personal profile at any time. If and when the language has been activated by an administrator, the preferred language will be displayed for that user.

If your language packs have been installed, you are ready to begin set up on localization options on a SharePoint site collection:

• Go to the **Site Actions** menu and select **Site Settings**.

• In the page that appears select **Language Settings**.
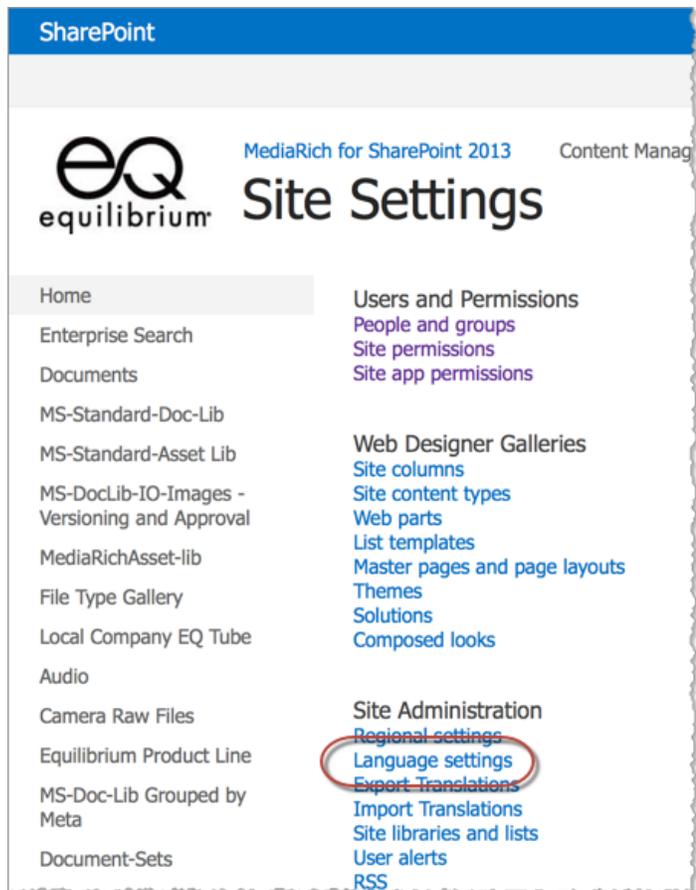
Figure 50: Language Settings

• In the screen that appears, select the **Alternate languages(s)** that you want to make available to users and click **OK**.
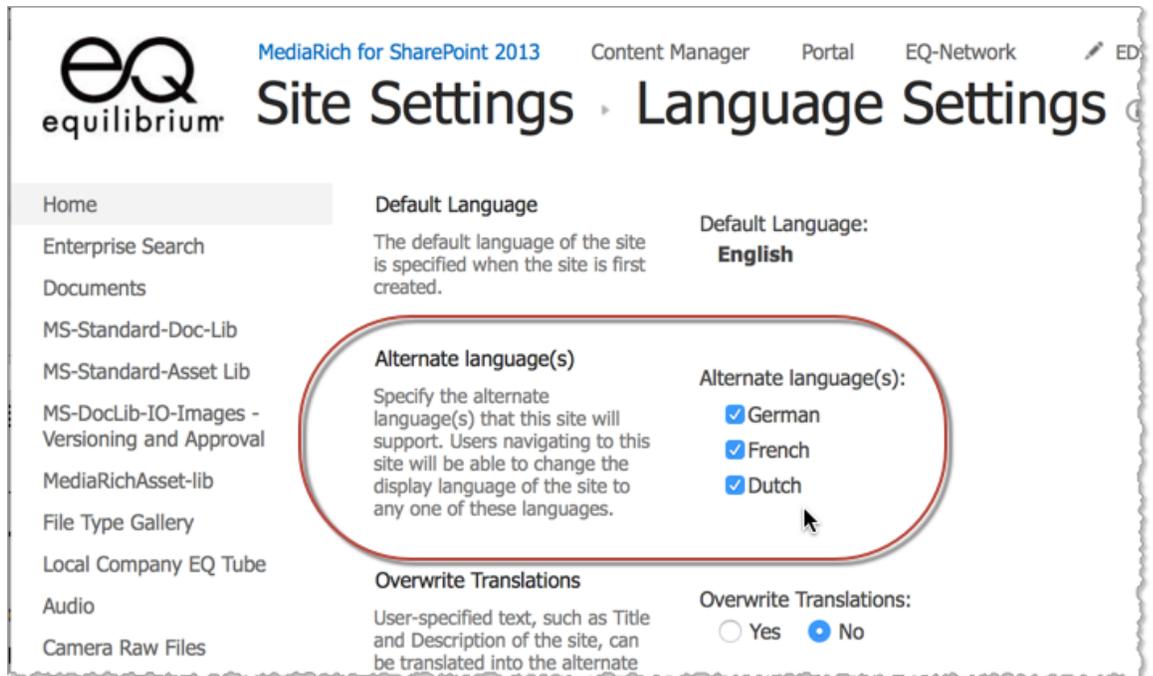
Figure 51: Selecting Alternate Languages

After you enable alternate language(s) for the site or subsite, a user can set their own language settings in their User Profile. After a user selects the language, the screen will refresh and the alternative language page will be visible.

Additional Administrator Tools

The MediaRich Visualizer Connector offers several tools for system administrators to tune, or update the MediaRich-enabled libraries. These are available from the command line and can found in the Connector install directory: C:\Program Files\Equilibrium\SharePointConnector. The functionality and their options are described in the following sections.

CheckSharePointCache.exe

This tool checks the cache against SharePoint site hierarchy. This tool will find items (including pyramid files) in the cache that are no longer in the SharePoint hierarchy and remove them. It checks all applications and all sites unless -site is specified, in which case it checks only the specified site for missing lists and items. -empty may be specified to empty the recycle bin for each site processed.

```
CheckSharePointCache.exe [-help] [-site <url>] [-empty] [-verbose]
```

- -help: print this message.
- -site <url>: URL to a top-level SharePoint site.
  If -site is specified, only this site is checked. Otherwise all sites are checked.
- -empty: if specified, empty the recycle bin.
  The recycle bin is emptied only for sites that are found in MediaRich caches.
- -verbose: if specified, write extra information.

ContentTypeUpgrade.exe

ContentTypeUpgrade crawls the entire farm for existing MediaRich InstantOn libraries that need to be upgraded to the MediaRich Document Content Type. During this process, it also replaces the existing column names with ones that use localized resource strings.

New InstantOn™ libraries that are created after the Connector install will already use the new MediaRich Document Content Type as well as the localized column names.

InstantOn libraries that are created or have already been upgraded will not be upgraded again; however, the string localization is done every time ContentTypeUpgrade is run without the -pretend option unless the -nolocalize option is used.

```
ContentTypeUpgrade.exe [-run] [-pretend] [-nolocalize] [<Site URL>]
```

- `-run`: Executes the actual upgrade. If -pretend is also specified, -pretend take precedence.
- `-pretend`: Runs the upgrade process without actually writing any changes to the database. Use this mode before upgrading with -run to see if there are any unexpected errors.
- `-nolocalize`: Skips the step of replacing the static English column strings in the MediaRich Content Type with the new localized string resource labels. If the localize has already run successfully but the Content Type upgrade did not, skipping this step can speed up the upgrade process.
- `<Site URL>`: If a URL to a SharePoint site is specified, the upgrade will only be performed on that site instead of crawling the entire farm, which can take a very long time. The URL should contain the protocol and hostname, such as http://myspserver/mysite, which would upgrade a single site; whereas http://myspserver would upgrade all applicable sites in the site collection. You can also use deep paths to subsites like http://myspserver/mysite/mysubsite, which would only upgrade 'mysubsite'.

If an error occurs during the upgrade process, it is usually possible to run the upgrade again and anything that wasn't upgraded the first time will be upgraded when run again.

A log named 'upgradelog.txt' is generated each time this program is run. It is recommended you do a backup of your SharePoint database before the upgrade is run.

DocLibWalker.exe

This tool traverses all MediaRich Visualizer for SharePoint Document Libraries from the specified path and performs checking and updating operations.

> *Important:* Using the DocLibWalker.exe tool when MediaRich Visualizer for SharePoint is in a disabled mode will result in an error message in the console window for each item that cannot process due to the Connector being disabled; however, processing will continue. Make sure that the system license is not exceeded and functionality is enabled before using this tool.

```
DocWalker [-help -path <url> -check -fix -update -pyramid -force -upgrade -verbose -timeout -links]
```

- `-help`: print this message.

- `-path <url>`: the path to the SharePoint site/library/folder/file to process. Can specify a web site, library, folder, or individual file. The -path parameter is optional: if it is not specified, all applications are checked.

- `-check`: check the configuration. The enclosing document library for the specified item is checked. Processing extends down the hierarchy from the path specified.

- `-fix`: fix the configuration, if possible. This The -fix option activates all features where they are inactive but should be active.

- `-update`: update metadata for all files.

- `-pyramid`: generate pyramid images for files.

- `-force`: recreate existing pyramid files.

- `-upgrade`: upgrade from previous version. implies -fix and -pyramid. -path is not allowed. The -upgrade option creates or recreates the virtual directory for the upload tool. It also implies -pyramid and -fix.

- `-verbose`: print progress.

- `-timeout`: timeout after the number of seconds specified and go on to the next task; -timeout 3600 would wait an hour.

- `-links`: Causes the link metadata to be extracted from documents that support link following in UniZoom. This is normally done when using -pyramid; however, if all you need is updated link information, using this option instead of -pyramid will allow DocLibWalker to complete its task much sooner.

MediaRich ECM Troubleshooting

Occasionally, some of the components of MediaRich ECM for SharePoint fail to perform as expected for a variety of reasons. This chapter is designed to help the SharePoint administrator diagnose and solve some of the most common issues.

Using the MediaRichTest shortcut

As a first step in diagnosing problems, use the MediaRich CORE Administration utility in the Start menu of the MediaRich CORE Server that is connected to MediaRich ECM for SharePoint.

On the MediaRich CORE server, choose **Start > Programs > Equilibrium > MediaRich > Equilibrium CORE Administration**. The administration utility displays the status of the server.

You can also choose **Info > Test MediaRich** to test the server.

Appendix summary

Investigating the Log Files

If the MediaRich CORE Server does not generate an image for the MediaRichTest shortcut, the most likely reason is file system security.

If it fails to produce the desired result, navigate to your shared folder and look for the MediaRichCore/Shared/Logs/<computername>/MediaGenerator.log file.

At the bottom of this file, there should an entry for each component of the MediaRich CORE Server, "SystemMo" and "MediaGen". Successful startup generates the following:

```
2002/11/15 05:05:58 SystemMo A SystemMonitor ready
2002/11/15 05:05:59 MediaGen A MediaGenerator ready
```

If this file is missing, the service user does not have write access to the shared folder.

In this case, add this user to the folder security of the shared folder and all subfolders, granting read and write access. If there is no entry for one of the two components, then that component did not have write access to the shared folder. Determine the user of the service involved (service logon user for MediaGen and SystemMo), and make sure that user has read/write access to the shared folder and all sub-folders.

Other entries in the MediaGenerator.log file indicate different sources of error (such as a corrupt, missing, or expired license key).

If you see an error about a missing license key, use the administration utility to reinstall the license.bin.

In the case of other errors, try the Equilibrium Support Forums or go to the Support Area. Of course, you can also submit a case to Equilibrium Support via your authorized support case personnel at the Equilibrium Support Portal.

Enhancing Performance

If SharePoint times out while exporting a large image, or the browser does not respond when generating thumbnail previews, there may be insufficient RAM on the server to store the image in memory while MediaRich processes it. It is important that the server(s) running SharePoint and MediaRich are powerful enough to handle the media requests and image operations required.

If multiple users are working in the same SharePoint image workspace and report that serving of page content is not delivered in a reasonable time, it may be because MediaRich and SharePoint are installed on the same server; the processing power required to handle image operations on large image files may be too much to perform multiple tasks.

It is recommended that MediaRich Visualizer for SharePoint be installed on its own server. Additional servers may be added to handle the image-processing requests. MediaRich servers are designed for a shared deployment scenario, where a MediaRich server farm would access a common repository and share system properties.

Bin Directory and Code Access Security

SharePoint administrators should note that the use of partially trusted assemblies (not installed in the global assembly cache) can significantly degrade the performance of SharePoint. This is especially true of the MediaRich Visualizer for SharePoint Web Parts, which make extensive use of the SharePoint object model. If SharePoint assemblies are installed anywhere besides the global assembly cache, the trust level in web.config should be set to full to avoid loss of performance.

DispForm.aspx Displays "(no title)"

The DispForm.aspx for existing document libraries may continue to incorrectly display "(no title)" even after a fix that was made in version 3.9.4 that corrected other instances of "(no title)" being displayed. These remaining cases can be corrected on a case by case basis by following the procedure:

1. In SharePoint Visual Designer open the MediaRich Image Library that has a DispForm.aspx which displays the "(no title)" issue.

2. Locate DispForm.aspx in the Forms folder.

3. Copy and paste DispForm.aspx to make a backup, one should be created with the name DispForm_copy(1).aspx.

4. Open DispForm.aspx

5. Switch to Code view.

6. On line two, paste the following:

```
<%@ Assembly Name="Equilibrium.MediaRich.SharePoint.Util, Version=380.0.0.0,
Culture=neutral, PublicKeyToken=94eb54e198ebf00b" %>

<%@ Register TagPrefix="mr" Namespace="Equilibrium.MediaRich.SharePoint.Util"
Assembly="Equilibrium.MediaRich.SharePoint.Util, Version=380.0.0.0,
Culture=neutral, PublicKeyToken=94eb54e198ebf00b" %>

<%@ Import Namespace="Equilibrium.MediaRich.SharePoint.Util" %>

After the Content Control with an ID of "PlaceHolderPageTitle" (usually about line
8) paste the new Controls:

<asp:Content ContentPlaceHolderId="PlaceHolderTitleBreadcrumb" runat="server">

<mr:MRSiteMapPath SiteMapProvider="SPContentMapProvider" id="ContentMap"
SkipLinkText="" ReplaceNode="(no title)" NodeStyle-CssClass="ms-
sitemapdirectional" runat="server">

</mr:MRSiteMapPath>  

</asp:Content>
```

7. Replace the following line (usually around line 14):

```
<SharePoint:ListItemProperty id="ID_ItemProperty" MaxLength=40 runat="server"/>
```

with this:

```
<SharePoint:ListItemProperty id="ID_ItemProperty" Property="FileLeafRef"
MaxLength=40 runat="server"/>
```

8. Save the page.

SharePoint Document Thumbnails

The thumbnails that display in the SharePoint document and asset libraries provide an important navigational and functional part of MediaRich Visualizer for SharePoint.

Running CheckSharePoint.exe deletes thumbnails and MediaRich ECM tools

This issue can occur when you set up multiple, distinct SharePoint Installations (such as SP1 and SP2), and a single MediaRich CORE server (a single MediaGenerator). In this scenario, running CheckSharePointCache.exe for the MediaGenerator attempts to synchronize the cache and for each found item it queries one of the SharePoint installations (SP1). This SharePoint cannot match the items in the second SharePoint installation (SP2), which results in the removal of those items from the cache.

> *Important:* While it is possible to have multiple SharePoint installations/MediaRich Visualizer for SharePoint Connectors pointing to a single MediaRich CORE Server, Equilibrium **does not support** this type of architecture.

You can run DocLibWalker to restore these items, but this process is potentially very time and resource intensive. For more information, see "DocLibWalker.exe" on page 98.

Suppressing InstantOn thumbnails for a specific page

The MediaRich Visualizer for SharePoint InstantOn feature operates on a per-library basis. On some pages or in some WebParts that display items from that library you could decide that you do not want thumbnails displayed.

To suppress the display of thumbnails on any page:

1. Navigate to the page where you want to disable thumbnails.
2. Use the SharePoint UI to enter page edit mode (typically, by selecting **Edit Page**).
3. Add a Content Editor Web Part to the page.
4. In the content area of the WebPart, paste in the following:
   ```
   <br id="mrthumbnailernorun" />
   ```
5. Open the layout section for the WebPart and select **Hidden**.
6. Click **OK** and exit page edit mode.

   The page should now display the SharePoint default icons rather than thumbnails.

To turn thumbnailing back on, edit the page and delete the Content Editor Web Part you added.

Customized Pages Used by MediaRich

SharePoint offers an array of methods for customizing your SharePoint installation from altering configuration settings to writing custom program components in C++. MediaRich Visualizer for SharePoint takes advantage of many of these same technologies when integrating the power of the MediaRich platform into SharePoint.

Consequently, any alterations you intend to make to your SharePoint installation need to take MediaRich Visualizer for SharePoint into account. You need to take special precautions if you intend to alter any of the pages or SharePoint structures that interact with MediaRich Visualizer for SharePoint, such as Web Parts, Web Part pages, CSS files, Content Types, and Forms. Any such modifications could have unintended consequences or side-effects, now or in the future when you plan to upgrade the products.

Method Not Allowed Error Using Media Batch Uploader

If users are receiving a "Method Not Allowed" error (specifically for the PUT method) when using the MediaBatch Uploader with IIS 7.x , check to see if the now-optional WebDAV module is installed. If it is and it is not required for some other purpose, uninstall it. It can interfere with the WebDAV support provided by SharePoint.

Java Error on Using Media Batch Uploader

If a Java error results from attempting to use Media Batch Uploader, verify that a web directory exists in IIS for MRUpload.
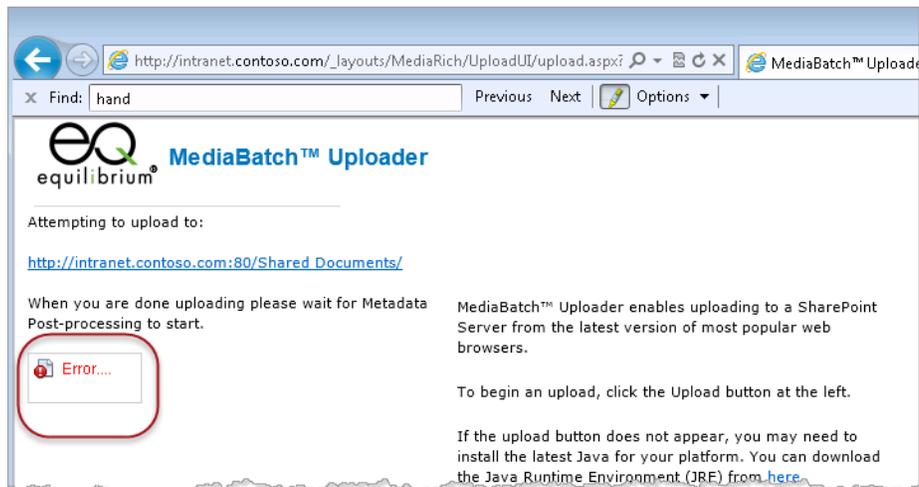

Figure 52: Errored MediaBatch Uploader

If the web directory does not exist, you can add it manually to IIS.

To add the MRUpload virtual directory to your SharePoint site:

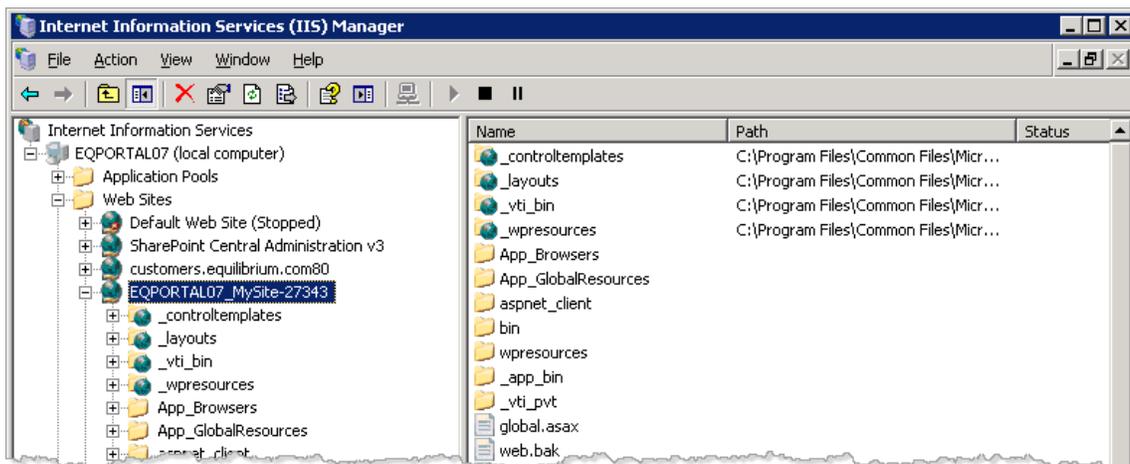1. Open IIS on the SharePoint server and expand the tree for the website

Figure 53: Accessing the SharePoint site in IIS

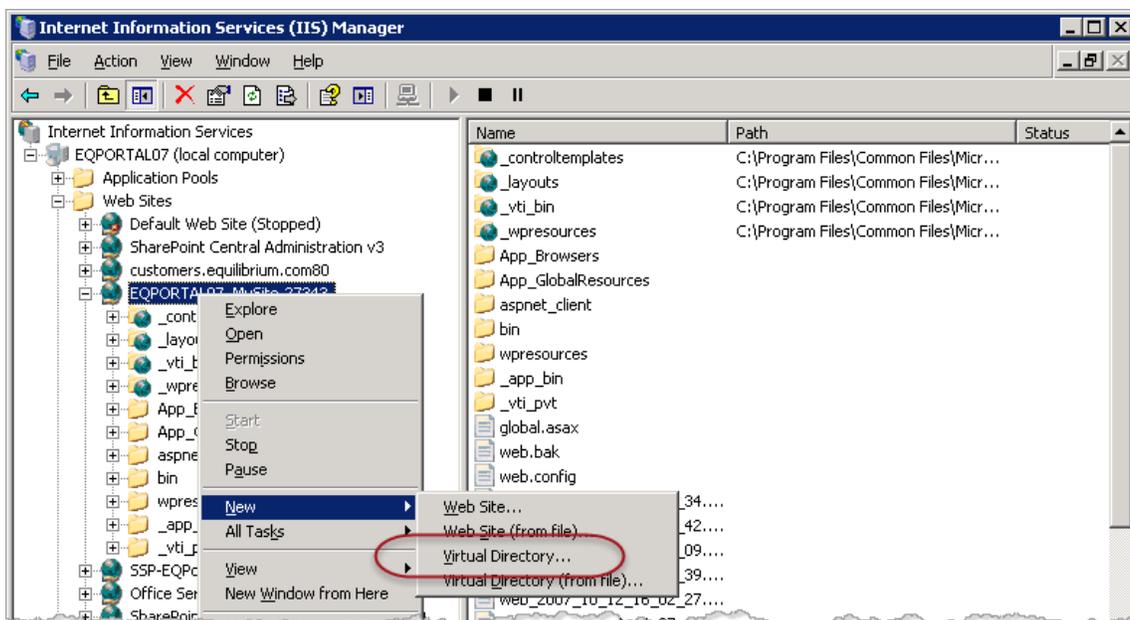2. Right-click the name of the web and select **New > Virtual Directory**.

Figure 54: Adding a new virtual directory

3. Click **Next** on the Virtual Directory wizard.

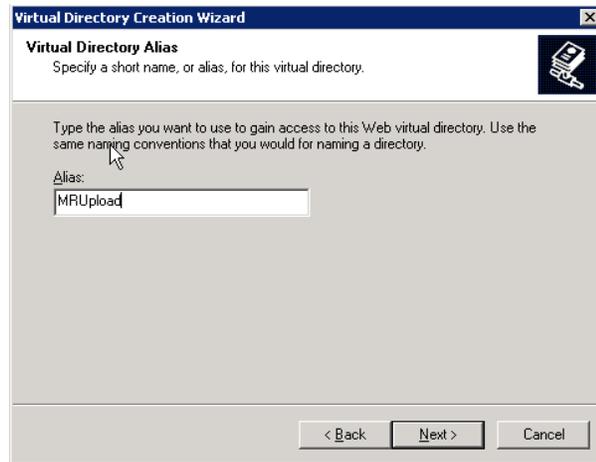4. For the **Alias**, use MRUpload (case sensitive) and click **Next**.

Figure 55: Specify the MRUpload alias

5. For the path, use C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\LAYOUTS\MediaRich\Upload and click **Next**.

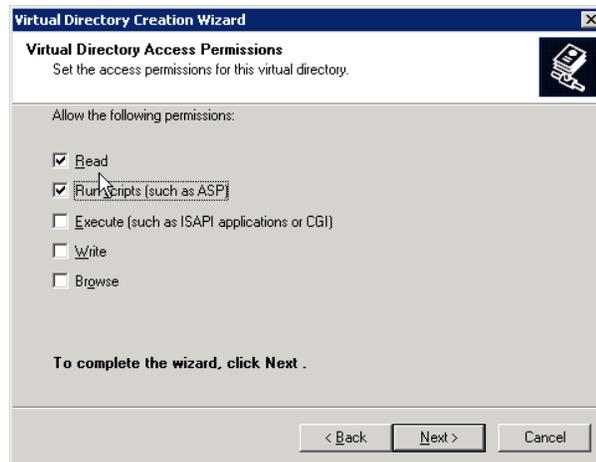6. For Access Permissions, select **Read** and **Run scripts (such as ASP)**, then click **Next**.

Figure 56: Setting the access permissions

7. Click **Finish** to exit the wizard.

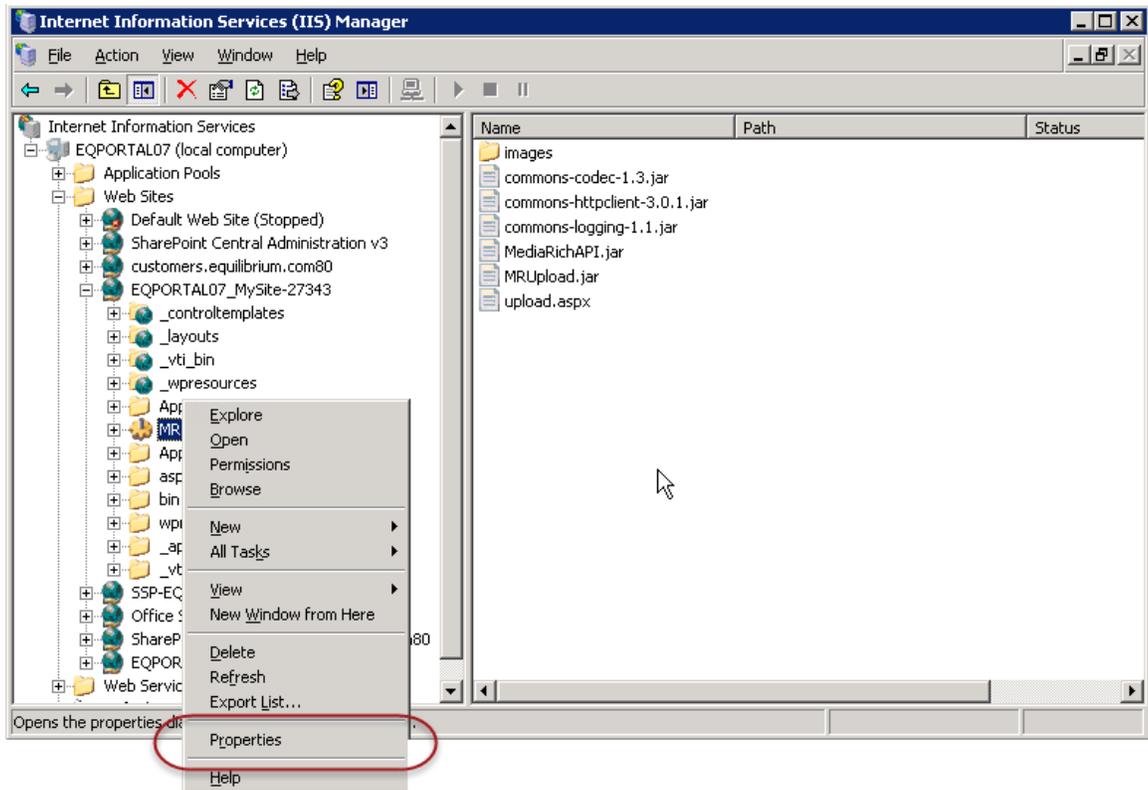8. Right-click the new Virtual Directory and select **Properties**.

Figure 57: Setting properties for the virtual directory

9. In the Virtual Directory tab, click **Remove** to remove the MRUpload application (we only want a virtual directory).
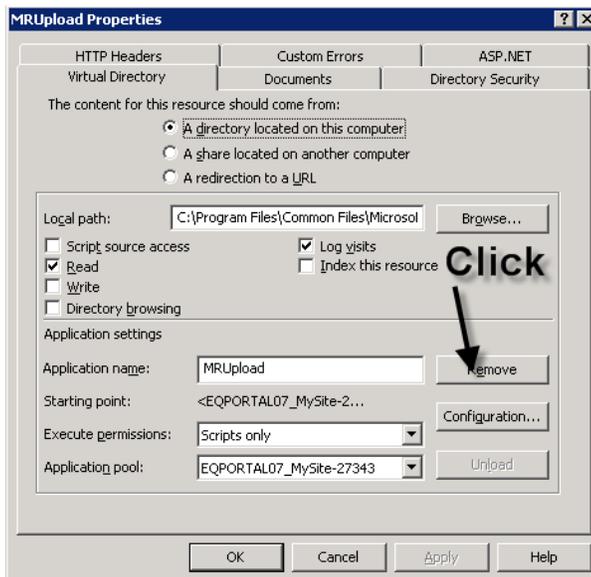

Figure 58: Removing the MRUpload application

10. Select the **Directory Security** tab and click the **Edit** button under 'Authentication and access control'.
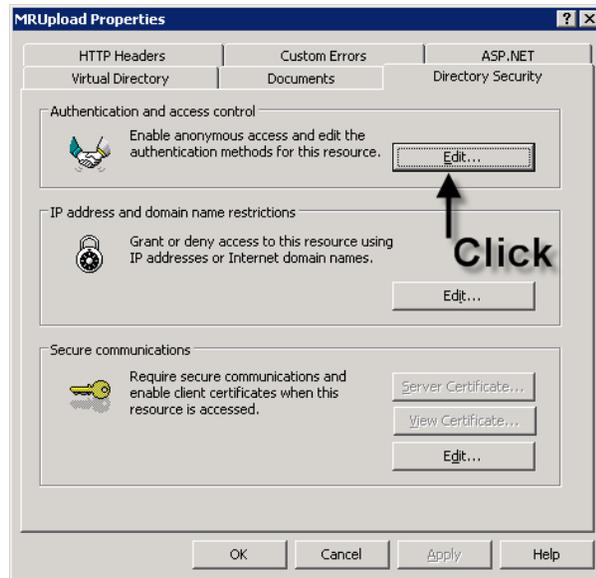
Figure 59: Editing the authentication and access

11. Clear all the check boxes, except **Enable anonymous access**.

Figure 60: Configuring the authentication methods

12. Click **OK** to close the Authentication Methods dialog.

13. Click **Apply**, then **OK** to close the MRUpload Properties window.

Your MRUpload directory is now ready for use and the Java error should go away. You may need to clear your browsers cache if you experience any errors from inside SharePoint when using the Media Batch Uploader.

File Format Support

MediaRich Visualizer supports over 450 image, video, audio, Office, Drawing, and RAW camera file types.

This appendix provides information about the read-write file format support in MediaRich, which also powers the high-end digital asset management features in Visualizer, such as image transformation, rich thumbnails, and video playback.

For a regularly updated file format list, please visit our Supported Formats page on the Equilibrium web site:
http://equilibrium.com/equilibriumnew/supported-formats/

Appendix summary

MediaRich Image File Formats Natively Supported

The MediaRich CORE provides support for the following image file formats.

MediaRich Visualizer for SharePoint does not include support for key Adobe file types (such as PhotoShop, Illustrator, and InDesign) and image export is limited to the original format and JPEG. The full MediaRich ECM for SharePoint product is required to enable full image file format support within SharePoint. See "MediaRich Visualizer Features" on page 8 for a comparison of Visualizer and the full MediaRich ECM for SharePoint product.

> *Note:* If not indicated by a "yes", Text Extraction may or may not work.

File extension and format	Category	Read/Write	Color space support	Metadata ingest	Metadata embed	Text extraction (all text)
PDF: Adobe Acrobat	Portable Document	Read/Write (PDF Image)	Renders to RGB, CMYK	Basic		yes (also one page, page range)
PIX: Alias Workstation Image	Image	Read/Write	RGB	Basic	None	
RAW: Panasonic Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
CR2: Canon Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
CRW: Canon Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
DNG: Adobe Digital Negative	Digital Negative	Read	Converts to RGB	Enhanced		
RAF: Fuji FinePix Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
GIF: Graphics Interchange Format	Image/Animation	Read/Write	RGB	Basic	Basic	

File extension and format	Category	Read/Write	Color space support	Metadata ingest	Metadata embed	Text extraction (all text)
JPE: JPEG	Image	Read	RGB, CMYK, with ICC Support	Enhanced		
JPEG: JPEG	Image	Read	RGB, CMYK, with ICC Support	Enhanced		
JPG: JPEG	Image	Read/Write	RGB, CMYK, with ICC Support	Enhanced	Enhanced	
J2K: JPEG 2000	Image	Read	GRAY, RGB, YCBRC Convert	Basic		
JP2: JPEG 2000	Image	Read/Write	GRAY, RGB, YCBRC Convert	Basic	None	
JPX: JPEG 2000	Image	Read	GRAY, RGB, YCBRC Convert	Basic		
J2C: JPEG 2000 Stream	Image	Read	GRAY, RGB, YCBRC Convert	Basic		
JCC: JPEG 2000 Stream	Image	Read	GRAY, RGB, YCBRC Convert	Basic		
JPC: JPEG 2000 Stream	Image	Read/Write	GRAY, RGB, YCBRC Convert	Basic	None	

File extension and format	Category	Read/Write	Color space support	Metadata ingest	Metadata embed	Text extraction (all text)
DCR: Kodak Digital Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
PCT: Mac PICT	Image	Read/Write	RGB	Basic	None	
PICT: Mac PICT	Image	Read	RGB	Basic	None	
MOS: Creo Leaf Mosaic Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
NEF: Nikon Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
ORF: Olympus Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
PCX: PC Paintbrush	Image	Read/Write	RGB	Basic	None	
PNG: PNG	Image	Read/Write	RGB	Enhanced	Basic	
PBM: Portable Bitmap	Image	Read	B&W	Basic		
PPM: Portable Pixel Map	Image	Read/Write	RGB	Basic	Basic	
PPMB: Portable Pixel Map	Image	Read	RGB	Basic		
PBMA: Portable Pixel Map	Image	Read	B&W	Basic		
PBMB: Portable Pixel Map	Image	Read	B&W	Basic		
BW: Silicon Graphics Image	Image	Read	RGB	Basic		
RGBA: Silicon Graphics Image	Image	Read	RGB	Basic		
SGI: Silicon Graphics Image	Image	Read/Write	RGB	Basic		
CS1: Sinar Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		

File extension and format	Category	Read/Write	Color space support	Metadata ingest	Metadata embed	Text extraction (all text)
ARW: Sony Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
TGA: Targa	Image	Read/Write	RGB	Basic	Basic	
TIF: TIFF	Image/Multi-page image	Read/Write	RGB, CMYK with ICC support	Enhanced	Enhanced	
TIFF: TIFF	Image/Multi-page image	Read	RGB, CMYK with ICC support	Enhanced		
BMP: Windows Bitmap	Image	Read/Write	RGB	Basic	Basic	
WBMP: Wireless Bitmap	Image	Read/Write	RGB	Basic	None	
3FR: Hasselblad Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
ERF: Epson Camera RAW	RAW Camera Image	Read	Converts to RGB	Enhanced		
FFF: Hasselblad Camera RAW	RAW Camera Image	Read	Converts to RGB	Enhanced		
KDC: Kodak Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
MEF: Mamiya Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
MRW: Minolta Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
PEF: Pentax Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
SR2: Sony Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		

File extension and format	Category	Read/Write	Color space support	Metadata ingest	Metadata embed	Text extraction (all text)
STI: Sinar Capture Shop Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		
X3F: Sigma Camera Raw	RAW Camera Image	Read	Converts to RGB	Enhanced		

MediaRich Audio and Video File Formats Natively Supported

AVCore 2 includes enhanced performance and GPU transcoding support. It reads all existing formats (EXCEPT FLI, FLC OR ANY VIDEO CONTAINING PALETTED DATA) and writes several existing formats, plus native Flash Video, Ogg Theora, GXF, MTS, and VPX/webm.

MediaRich CORE supports the following audio and video file formats. The video and video/audio formats support 24 bit RGB.

MediaRich Visualizer for SharePoint does not provide support for full file transcoding and video export is limited to MP4. The full MediaRich ECM for SharePoint product is required to enable full video and audio file format support within SharePoint. See "MediaRich Visualizer Features" on page 8 for a comparison of Visualizer and the full MediaRich ECM for SharePoint product.

> *Important:* Currently, AVCore 2 is only capable of reading non-paletted video frames.

Audio/Video File Extension and Format	Category	Read/Write	Metadata ingest	Metadata embed
AAC: AAC Audio	audio	Read	Enhanced	None
AC3: AC3 Audio Stream	audio	Read	Enhanced	None
AMR: AMR Audio	audio	Read	Enhanced	None
AIF: Audio Interchange File Format (Mac and SGI)	audio	Read, Write	Enhanced	None
AIFF: Audio Interchange File Format (Mac and SGI)	audio	Read, Write	Enhanced	None
DV: Digital Video Stream	video	Read, Write	Enhanced	None
FLV: Flash Video	video	Read, Write	Enhanced	None
F4V: Flash Video	video	Read, Write	Enhanced	None
FLC: Autodesk FLIC Animation File	animation	Read, Write	Enhanced	None

Audio/Video File Extension and Format	Category	Read/Write	Metadata ingest	Metadata embed
3G: iPhone cell, Mobile 3G	video	Read, Write	Enhanced	None
M4V: iPod, iPhone wifi, Apple TV	video	Read, Write	Enhanced	Enhanced (Transcode only)
MXF: Material Exchange Format	video	Read, Write	Basic	None
3GP: Mobile 3G Audio/Video	video	Read, Write	Enhanced	None
3G2: Mobile 3G Audio/Video	video	Read, Write	Enhanced	None
3GPP: Mobile 3G Audio/Video	video	Read, Write	Enhanced	None
3GP2: Mobile 3G Audio/Video	video	Read, Write	Enhanced	None
MJPG: Motion Jpeg	video	Read, Write	Enhanced	None
MP2: Mpeg Audio Layer 2	audio	Read	Enhanced	None
MPEG: Mpeg1 or 2 Video Program Stream	video	Read, Write	Enhanced	None
MPG: Mpeg1 or 2 Video Program Stream	video	Read, Write	Enhanced	None
M1V: Mpeg1 Video	video	Read, Write	Enhanced	None
MP3: Mpeg2 audio Layer 3	audio	Read	Enhanced	None
VOB: Mpeg2 DVD (unencrypted file required)	video	Read	Enhanced	None
PS: Mpeg2 Program Stream	video	Read, Write	Enhanced	None
MPE: Mpeg2 Standard	video	Read, Write	Enhanced	None
MPEG2: Mpeg2 Standard	video	Read, Write	Enhanced	None
MPG2: Mpeg2 Standard	video	Read, Write	Enhanced	None
MP2: Mpeg2 Standard, RAM and RM	video	Read, Write	Enhanced	None
M2T: Mpeg2 Transport Stream	video	Read, Write	Enhanced	None
M2V: Mpeg2 Video	video	Read, Write	Enhanced	None
M4A: Mpeg4 AAC Audio	audio	Read, Write	Enhanced	None
Mpeg4 (RAW): Mpeg2 RAW Video	video	Read	Enhanced	None

Audio/Video File Extension and Format	Category	Read/Write	Metadata ingest	Metadata embed
MP4: Mpeg4 with AAC and other standard Audio encode	video	Read, Write	Enhanced	None
OGG: OGG Vorbis Audio	audio	Read	Enhanced	None
MOV: Quicktime, Hinted movie * See Codec supported detail	video	Read, Write	Enhanced	Enhanced
RAM: Real Media (writes only 1.0/2.0)	video	Read, Write	Basic	None
RM: Real Media (writes only 1.0/2.0)	video	Read, Write	Basic	None
GXF: Sony Mpeg2-XDCAM SD/HD	video	Read, Write	Basic	None
AU: Sun Microsystems Audio File	audio	Read, Write	Basic	None
AVI: Windows Audio Video Interface	video	Read, Write	Enhanced	None
ASF: Windows Media Active Server (2) (3)	audio/video	Read, Write	Enhanced	Enhanced
WMA: Windows Media Audio (3)	audio	Read, Write	Enhanced	Enhanced
WMV: Windows Media Video (1) (3)	video	Read, Write	Enhanced	Enhanced
Wave: Windows PCM audio format	audio	Read, Write	Enhanced	None

(1) Windows Media 11 for WMV in HD (64-bit Windows Server 2003 not supported)

(2) Sharp Audio Codec must be installed.

(3) When exporting, CBR or Quality-based VBR output settings for audio are the only types supported. Bitrate VBR for audio is not supported.

Basic Metadata support means that MediaRich can extract size, bit depth, frames, and time.

Enhanced Metadata support means there is complete extraction and embedding of metadata with field handlers shown in the documentation. It can embed some kind of information other than width/height/depth/time/samplerate. The types of metadata vary from file format to file format: for instance, not every file format can embed Exif data, or author, etc.

Codecs we have tested and support with legacy QuickTime: Animation, Apple Intermediate Codec, BMP, Cinepak, Component Video, DV - PAL, DV- NTSC, Graphics, H.261, H.263, H.264, JPEG 2000, Motion JPEG A, Motion JPEG B, MPEG-4 Video, Photo - JPEG, Planar RGB, PNG, Sorenson Video, Sorenson Video 3, TGA, and TIFF.

Audio Codecs: 24-bit Integer, 32-bit Floating Point, 32-bit Integer, 64-bit Floating Point, A-Law 2:1, AMR Narrowband, Apple Lossless, IMA 4:1, MACE 3:1, MACE 6:1, MPEG-4 Audio (AAC), Qualcomm PureVoice.

LibreOffice Expanded File Formats Supported

MediaRich supports the following file formats when LibreOffice 6.0 is installed. They are rendered to RGB. These are read-only on Macintosh and Windows.

> *Note:* If not indicated by a "yes", Text Extraction may or may not work.

File extension and format	Category	Text extraction (Windows only)
PDB: AportisDoc (Palm)	Word Processing	yes
DXF: AutoCAD Interchange Format	Drawing-Vector	
CGM: Computer Graphics Metafile	Presentation	
XML: DocBook, Microsoft Excel/Word 2003 XML	Word Processing/Spreadsheet	yes
EMF: Enhanced Metafile	Drawing-Vector	
HWP: Hangul WP 97	Word Processing	yes
HTM, HTML: HTML Document	HTML	yes
OTH: HTML Document Template	HTML	yes
PCD: Kodak Photo CD (192x128, 768x512, 384x256)	Drawing-Raster	
123: Lotus 1-2-3	Spreadsheet	yes
WK1: Lotus 1-2-3	Spreadsheet	yes
WKS: Lotus 1-2-3	Spreadsheet	yes
XLSB: Microsoft Excel 2007 Binary	Spreadsheet	yes
XLSM: Microsoft Excel 2007 XML	Spreadsheet	yes
XLSX: Microsoft Excel 2007 XML	Spreadsheet	yes
XLTM: Microsoft Excel 2007 XML Template	Spreadsheet	yes
XLTX: Microsoft Excel 2007 XML Template	Spreadsheet	yes
XLM: Microsoft Excel 4.x-5.0/95/97/2000/XP	Spreadsheet	yes
XLC: Microsoft Excel 4.x-5.0/95/97/2000/XP	Chart	yes
XLW: Microsoft Excel 4.x-5.0/95/97/2000/XP	Spreadsheet	yes
XLT: Microsoft Excel 4.x-5.0/95/97/2000/XP	Spreadsheet	yes

File extension and format	Category	Text extraction (Windows only)
XLS: Microsoft Excel 4.x-5.0/95/97/2000/XP	Spreadsheet	yes
PPTM: Microsoft PowerPoint 2007 XML	Presentation	
PPTX: Microsoft PowerPoint 2007 XML	Presentation	
POTM: Microsoft PowerPoint 2007 XML Template	Presentation	
POTX: Microsoft PowerPoint 2007 XML Template	Presentation	
PPS/PPSX: Microsoft PowerPoint 97/2000/XP	Presentation	
PPT: Microsoft PowerPoint 97/2000/XP	Presentation	yes
POT: Microsoft PowerPoint 97/2000/XP Template	Presentation	
DOC: Microsoft WinWord, 5, 6.0/95, 97/2000/XP	Word Procession	yes
DOCM: Microsoft Word 2007 XML	Word Procession	
DOCX: Microsoft Word 2007 XML	Word Procession	yes
DOTM: Microsoft Word 2007 XML Template	Word Procession	yes
DOTX: Microsoft Word 2007 XML Template	Word Procession	yes
DOT: Microsoft Word 95, 97/2000/XP Template	Word Procession	yes
OTG: ODF Drawing Template	Drawing-Vector	
ODG: ODG Drawing, ODF (Impress)	Drawing-Vector	
ODM: ODF Master Document	Word Processing	yes
ODP: ODF Presentation	Presentation	
OTP: ODF Presentation Template	Presentation	
ODS: ODF Spreadsheet	Spreadsheet	yes
OTS: ODF Spreadsheet Template	Spreadsheet	yes
ODT: ODF Text Document	Word Processing	yes
OTT: ODF Text Document Template	Word Processing	yes
STD: OpenOffice 1.0 Drawing Template	Drawing-Vector	
SXD: OpenOffice 1.0 Drawing, OpenOffice Impress	Drawing-Vector	
STW: OpenOffice HTML/Text Template	HTML	
SXG: OpenOffice 1.0 Master Document	Word Processing	yes

File extension and format	Category	Text extraction (Windows only)
SXI: OpenOffice 1.0 Presentation	Presentation	
SXC: OpenOffice 1.0 Spreadsheet	Spreadsheet	yes
STC: OpenOffice 1.0 Spreadsheet Template	Spreadsheet	yes
SXW: OpenOffice 1.0 Text Document	Word Processing	yes
MET: OS/2 Metafile	Drawing-Vector	
PXL: Pocket Excel	Spreadsheet	yes
PSW: Pocket Word	Word Processing	yes
PGM: Portable Graymap	Drawing-Raster	
WB2: Quattro Pro 6.0	Spreadsheet	yes
RTF: Rich Text Format, RTF (OpenOffice Calc)	Word Processing	yes
SVG: Scalable Vector Graphic	Drawing-Vector	
SGV: StarDraw 2.0	Drawing-Vector	
SDP: StarImpress 4.0/5.0	Presentation	
SVM: StarView Metafile	Drawing-Vector	
SDW: StarWriter 1.0, 2.0, 3.0-5.0	Word Processing	yes
SGL: StarWriter 4.0/5.0 Master Document	Word Processing	yes
SGF: StarWriter Graphics Format	Drawing-Vector	
STW: StarWriter doc	Word Processing	
SXD: OpenOffice 1.0 drawing	Drawing	
STD: OpenOffice 1.0 drawing	Drawing	
RAS: Sun Raster Format	Drawing-Raster	
SLK: SYLK	Spreadsheet	yes
602: T602 Document	Word Processing	yes
UOS: Unified Office Format spreadsheet	Spreadsheet	yes
UOF: Unifed Office Format spreadsheet, text, presentation	Spreadsheet	yes
UOP: Unified Office Format presentation	Presentation	

File extension and format	Category	Text extraction (Windows only)
WMF: Windows Metafile	Drawing-Vector	
WPD: WordPerfect Document	Word Processing	yes
XBM: X Bitmap	Drawing-Raster	
XPM: X PixMap	Drawing-Raster	

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