

Metalogix® ArchiveManager for Files 8.3

Media Store Administration Guide

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Legend

- CAUTION:: A caution icon indicates potential damage to hardware or loss of data if instructions are not followed.
- **IMPORTANT, NOTE, TIP, MOBILE OR VIDEO:** An information icon indicates supporting information.

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Introduction

All your archived emails and their attachment will be kept in the HSM store. Thus the location of the HSM store needs to be a drive with plenty of free space to keep the stored files. The HSM Store is supported on HDD/Jukebox Systems (AMASS, Pegasus, PoINT) / Tivoli / EMC Centera / DVD / CD_ROM / SAN / NetApp / JVC / HP RISS / HP FSE / NAS / Plasmon etc.

In this guide you will be shown how to create different types of MediaStores (HSM stores) and how to configure them by using Configuration tool. Should there be some MediaStores already created, this tool is able to modify an existing MediaStore, delete it, or even connect to a remote computer if a MediaStore is placed there.

Two basic MediaStore types:

- Jukebox, Harddisk, Network
- Simple Path
- NOTE: If you have a harddisk or raid-system, and you do not need directories with a specific size (e.g 5 GB) always use Simple Path store-type.

Following sections contain comprehensive description on how to create these MediaStores and many others.

On-Premise Media Stores

Depending on the MediaStore type you plan to use find the corresponding section in this guide and configure the store accordingly as instructed. First two sections deal with two basic MediaStore types – Jukebox, Harddisk, Network and Simple Path. Then other store types follow. All supported cloud stores are grouped in the Cloud Stores chapter.

Jukebox, Hard Disk or Network Media

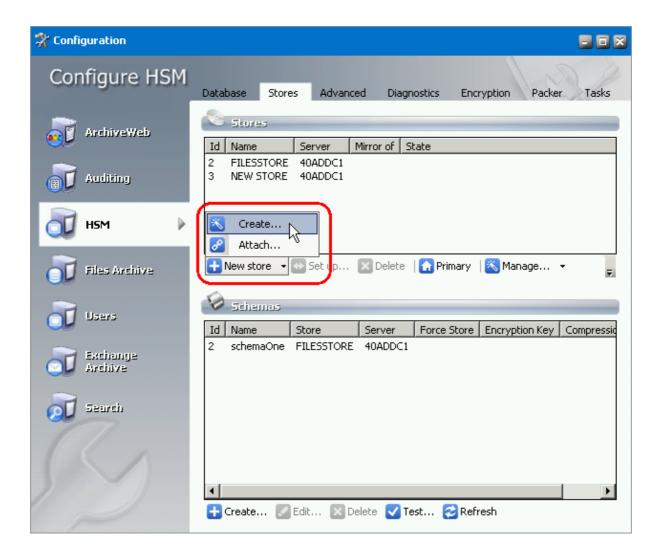
To create this type of MediaStore you basically need the following information: the UNC-path to HDD or a jukebox (AMASS, PEGASUS, or POINT) which is prepared for usage, and a second path if, for security reasons, you want the files to be archived at some other location (i.e. under some other path) as well.

To create a Jukebox, Harddisk or Network MediaStore:

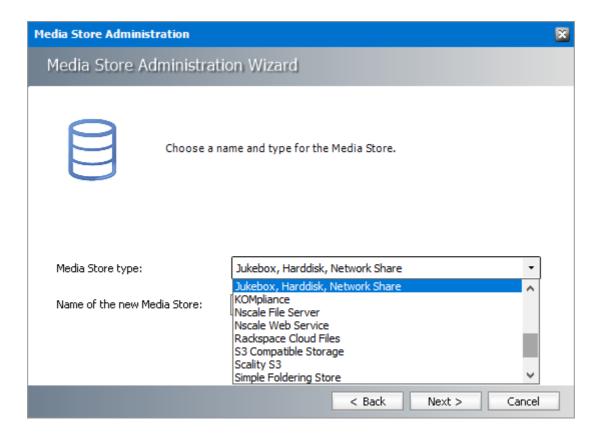
1. Open Archive Manager Configuration.

NOTE: By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig**.

- 2. In the **Configuration** tool select the **HSM / Stores** tabs.
- 3. You may be prompted to enter the super-user password. Then click **OK**.
- 4. Already created stores (and schemas) are listed on the Stores tab. Should you wish to create new one, click the **New store / Create option** located under the Stores list.



 In the MediaStore Configuration window select the desired store type from the MediaStore type drop-down (in our case "Jukebox, Harddisk, Network Share"). Then enter the name for your new MediaStore in the Name of the new MediaStore text box. Click Next.

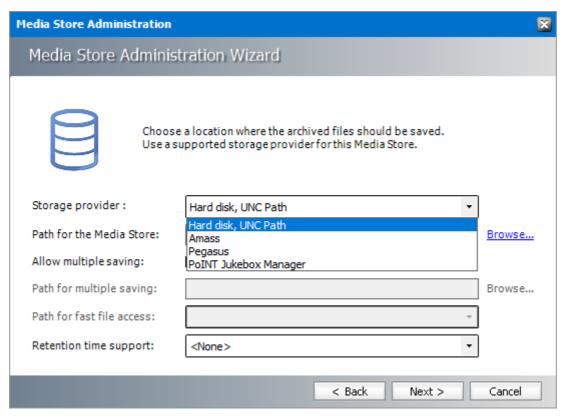


NOTE: If you have a harddisk or raid-system, and you do not need directories with a specific size (e.g 5 GB) always use **Simple Path** store-type (see "Simple Path MediaStore" section further in this manual).

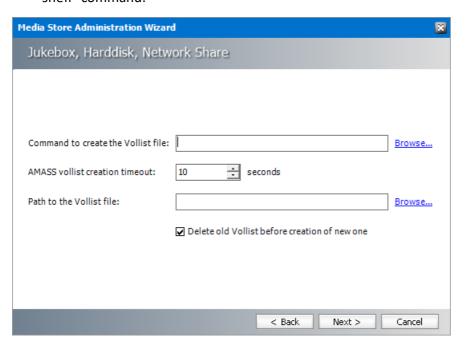
6. In the **Storage Provider** drop-down list select **Hard disk or UNC path** (in the case that your store will be placed on a hard-disk drive or share).

Or select the appropriate storage provider, i.e. the manufacturer of your jukebox software: **Amass** (see the **NOTE** below), **Pegasus** or **PoINT Jukebox Manager**.

Please note that some settings available for Harddisk or UNC path may not be applicable to other storage types. (Not applicable settings will be grayed out.)

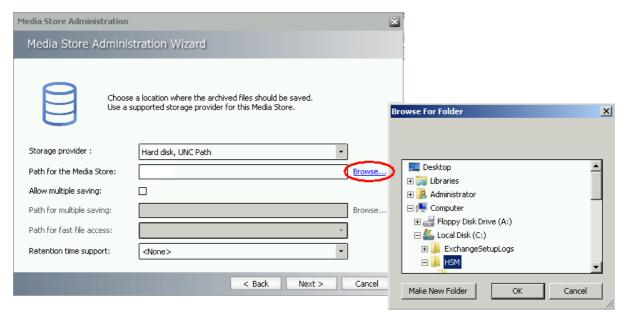


NOTE: After Amass is selected as a storage provider and all settings are specified on the current dialog as described further, Amass specific options have to be defined on a special dialog (see the following picture). Amass is Jukebox management software for UNIX. For getting the size of each media there is a command-line-program called "vollist". The user has to create a batch-file which calls this command on UNIX and creates a file with the result of this command that the store can read. Normally customers do this via a RSH – "remote shell" command.



7. Click on the **browse** button next to the **Path of the MediaStore** box to choose a location of the desired MediaStore. Click **OK**.

NOTE: To create a new folder, use the **Make New Folder** button. Enter the name for this new folder, e.g. *HSM* and click **OK**.

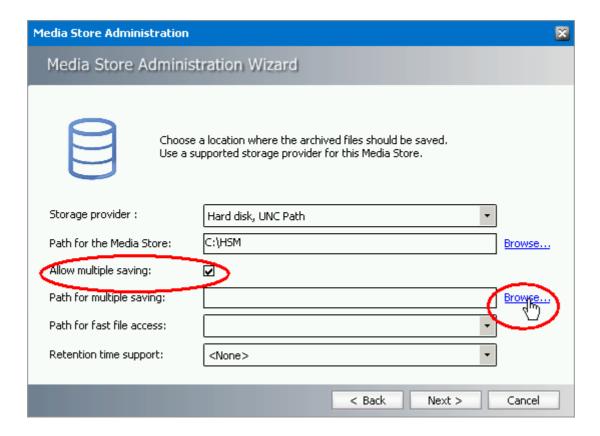


8. Should you wish to archive files simultaneously to some other location as well, select the **Activate multiple saving** check box. Use the **browse** button, similarly as above, to specify a second path.

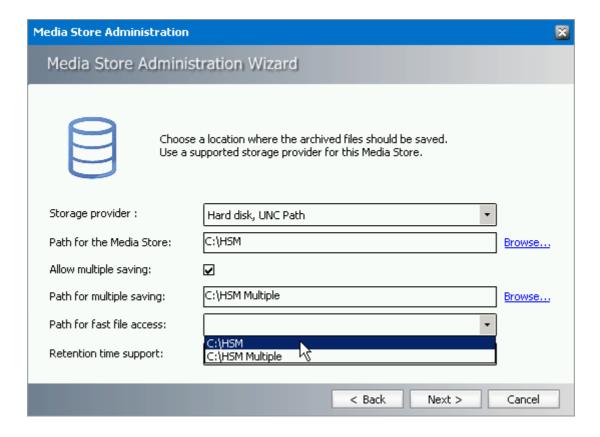
The files will be archived to this second location, too.

NOTE: The second path can be anything that is reachable by a drive-letter or a network share, something accessible with Windows Explorer.

In normal usage the first path is a slow MediaStore (e.g. Pegasus Jukebox), and the second path is a large SAN (e.g. local RAID or Harddisk). For fast access you should use SAN because it is much faster.



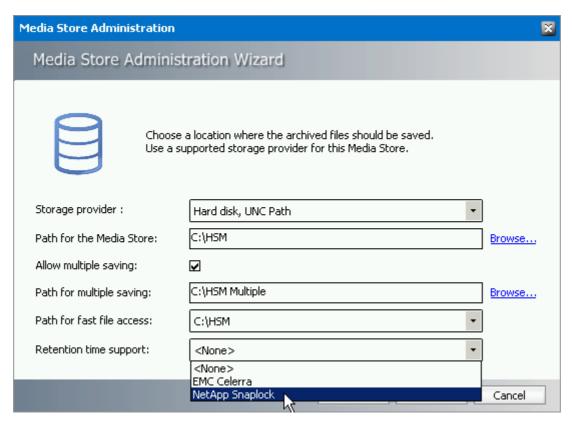
9. In the case that you activated multiple saving, click on the down arrow next to the **Path of the fast file access** path drop-down list and select the faster access path.



10. If you are using NetApp and want to use SnapLock, select the **NetApp SnapLock** option in the **Supports Retention-Times** down-drop box to secure the compliancy with law regulations regarding archiving of electronic documents. (e.g. HIPAA, OFRS, COSO etc.)

In case you are using EMC Celerra and you wish to use retention times for your archived files, select **EMC Celerra**.

Click Next.



11. In the case that you activated multiple saving the following window gets displayed. Here you may configure multi-storing.

The **Multiple Saving** section:

Should you select the **From the media with number** check-box, then you may choose from which numbered medium multiple saving was activated.

Should you select the **For the last media** check box, then you may enter a number which will specify up to which media multiple saving would be done.

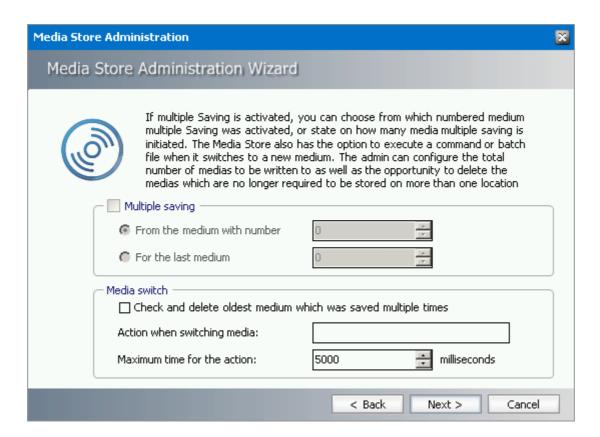
The Media Switch section:

Should you select the **Check and delete oldest medium which was saved multiple times** check box the system will check for media which are no longer required to be stored on more than one location and deletes the redundant copies.

In the **Action when switching media** text box you may enter a command or a batch file that will be run when switching between media.

In the **Maximum time for the action (ms)** text box specify a maximum time frame that you want to set for the action.

Then click **Next**.



12. On the following page you need to configure media names. You also need to specify the total number of media in this MediaStore to be used by Archive Manager.

In the **Create folder names using** down-drop box select whether HSM folders names should be created in lowercase only, uppercase only or standard.

If you select the **Create file and folder-names using 8.3 convention** check box then the file-name will be truncated to 8 characters and extension to 3 characters, provided that the underlying system doesn't support long filenames.

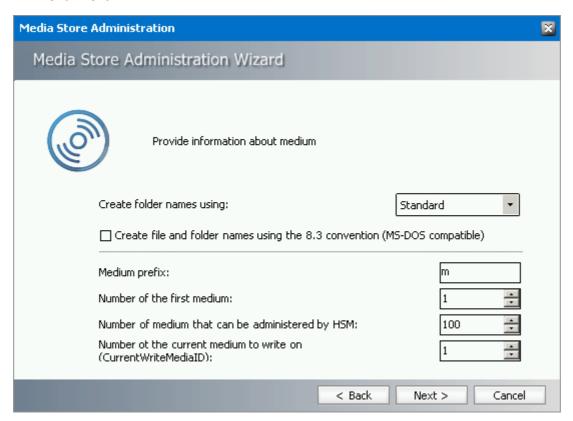
To specify a prefix for the desired MediaStore use the **MediaPrefix** text box. You may enter 2 alphanumerical characters. Those characters will be located in front of each of the media along with the respective media number. In our example we chose LS as the media-prefix (as local store), so the name of one of the media would be LS000001.

In the **Number of the first medium** text box you may specify a number that will be assigned to the first medium.

In the **Number of media that can be administered by HSM** text box you need to specify the number of media to be administered by Archive Manager. For instance, if there are 20 media in a Jukebox, then enter 20.

In the **Number of current media to write on (CurrentWriteMediaID)** text box you may specify the number of the medium that will be used as the first one for archiving.

Click Next.



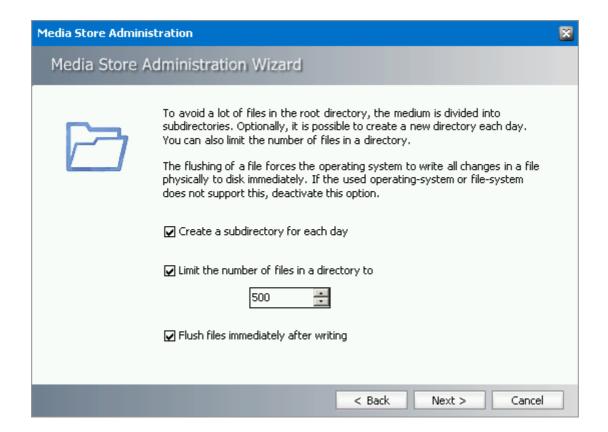
13. On the following page you may specify whether to create a directory for each day.

It is recommended to select the **Create a sub directory for each day** check-box to create a directory for each day (an optimal condition). Subdirectories are being created with the path 000001, 000002, and so on. This is necessary for performance reasons, the more files a directory contains the longer the search for a file can take.

By selecting the **Limit the number of files in directory to** check box you may even limit the number of files per directory. Simply enter the appropriate data in the text field.

Select the **Flush files immediately after writing** check box. Normally all file-systems support flushing of files. Disable the option only if you have problems with storing files.

Click Next.



14. On this page you need to specify further settings for the used medium, as well as the total size of the medium.

To set a storage space not to be used on a medium, enter the desired value in the **Space on** a media that should not be used text box. This value is defined in MB.

Besides, you may set a value which refers to a warning message. As soon as free storage space is lower than the value specified in the Issue a warning if the size of the free space on the current medium is lower than the entered value and the next medium to write on is not ready text box, you would get a warning message. This value is also in MB. When this value is reached the availability of a new medium is being checked. This value should comply with the approximate average daily amount of MB to archive, so that new medium can be searched in a timely manner.

In the **Total size of media in MB** text box you need to enter the total size of a medium.

Then click **Next**.



15. HSM needs to know when to start a new medium, as there is maximum medium size set. For this purpose it needs to recalculate the used space periodically. On this page you may choose how often the free space on a medium should be calculated. It can be set in accordance with the number of files, or file size, or simply in seconds. As soon as any of those values are met, the remaining storage space is recalculated.

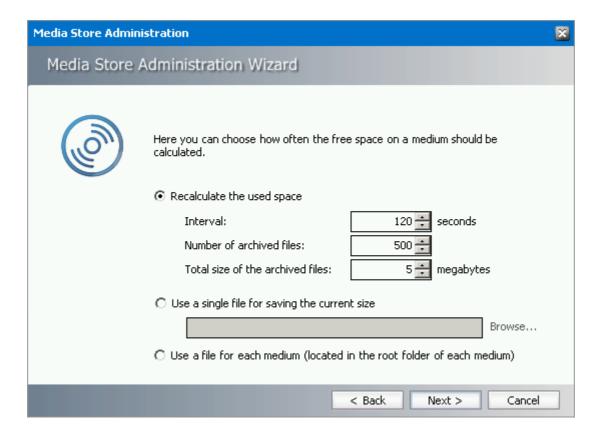
To periodically recalculate the free space on the medium, simply enter a desired time span in the **Interval** text box.

To recalculate the free space on a medium depending on the number of files that have been archived since the most recent calculation, simply enter the desired value in the **Number of archived files** text box.

To recalculate the free space on a medium depending on the archived volume since the most recent calculation, simply enter the desired value in the **Total size of the archived files** text box. This value should be given in MB.

If the user does not want to allow the HSM to recalculate the used space periodically (because it might be time-consuming operation), he can specify a file where the value of the used space on a medium will be saved. The file is updated each time a file is stored on the medium. Here he can decide whether to use a single file for this purpose for all media in the store – **Use a single file** check box - or create a separate file for each media – **Use a file** for each media check box.

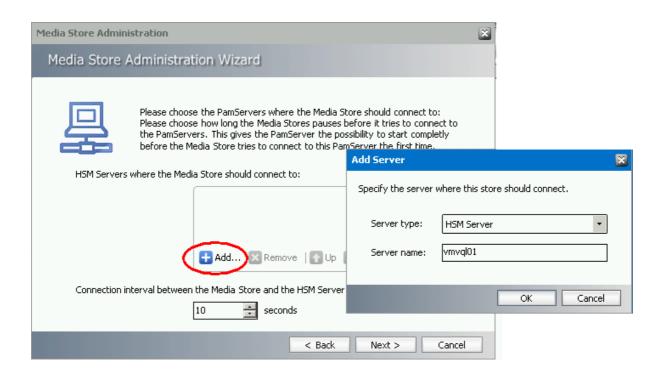
Click Next.



16. On this page you need to specify where the MediaStore should connect to.

Click the **Add** button to specify the HSM server.

In the pop-up dialog set the **Server type** to "HSM Server" and enter the **Server name**.



The HSM Service contacts the MediaStore you specified in periodical intervals. Specify this interval in the **Connection interval between the MediaStore and the HSM Server** in seconds text box.

Click Next.

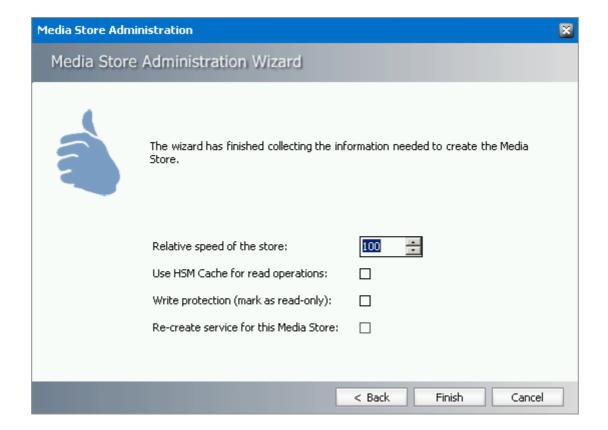
17. In the following dialog the **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.

If HSM should copy files into the cache when reading from this store, check **Use HSM Cache** for read operations.

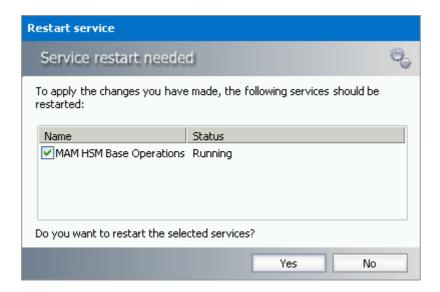
If this media should be read-only, check **Write Protection** check box (only supported for "Jukebox, Harddisk, Network" and "Simple Path").

If the **Re-create service for this media store** is checked, the store will be running in the background as a separate service. This option means that the MediaStore Administration Wizard should re-register the service for the administrated store. It is useful if the store service was deleted and the user wants to re-create it.

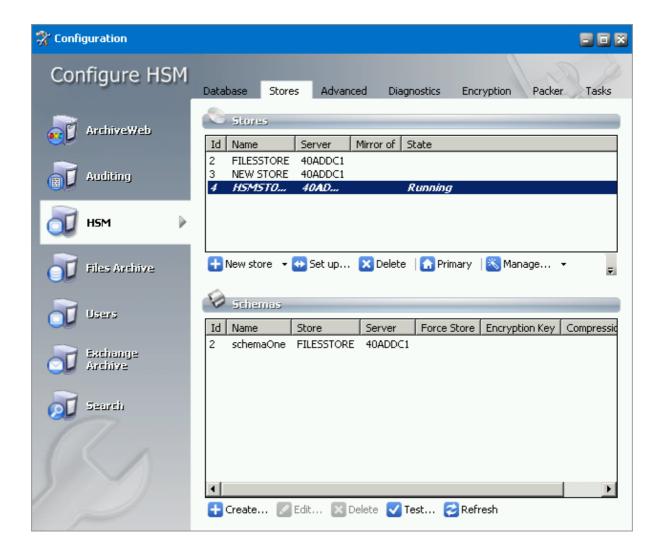
Click **Finish**.



18. You will be asked to restart the service to apply the changes. To restart, click Yes.



- 19. Click on the Finish button to close the window.
- 20. Back in the **Configuration** tool the store you have created will be displayed in the Stores list view.



NOTE: Should the store display "State – Stopped" it needs to be started. To start a store, click **Manage** down arrow / Manage service state. Locate the desired store in the list and click **Start**.

TIPS & TRICKS: Whenever a store of a Jukebox type is created, a service called PMSSTORESV<NAMEOFTHESTORE> is created as well. Its *startup type* is set to "manual" in **Start \ Settings \ Control panel \ Administrative tools \ Services**. We recommend setting it to "automatic" so that the service is started automatically, e.g. after reboot.

Having a store ready is not enough. We need at least one schema, which is basically the path to the MediaStore. This schema needs to be registered in the HSM database. For more information on specifying a schema, see the HSM Install and Config Guide.

Simple Path MediaStore

In this section will guide you through the process of creating **Simple Path** MediaStore.

Simple Path store-type is recommended if you do not need directories with a specific size (e.g. 5 GB) and you have a Harddisk or RAID-system as a storage.

This kind of store is faster and outperforms all other stores under the same circumstances (same hardware, same path).

Description:

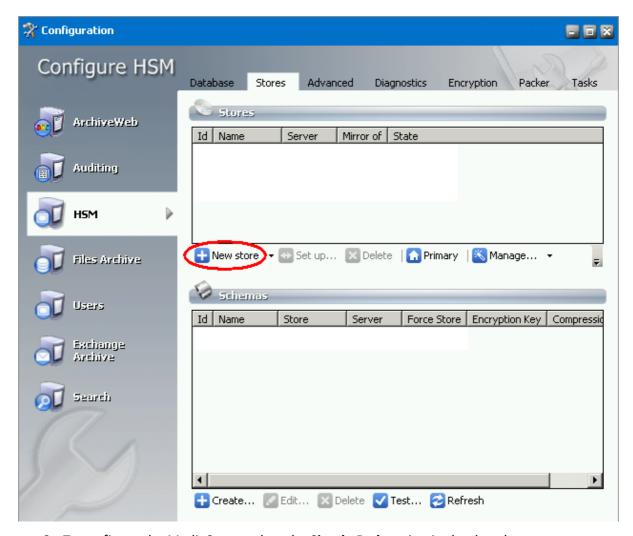
- It does not do size checking
- It writes files on any UNC path (e.g. Harddisk, Network-Share)
- Files are stored in subdirectories (there are no "medias" with a specific size) <RootPath>\<Year>\<Month>\<Day>\<Hour>\<counter>\Filename.txt e.g. D:\HsmStore\2013\04\26\18\000\ 4_000000f4.tif

NOTE: If you need to access a share you have to allow the computer account (Local System) to access a share or run PamHsmTSv with a special user.

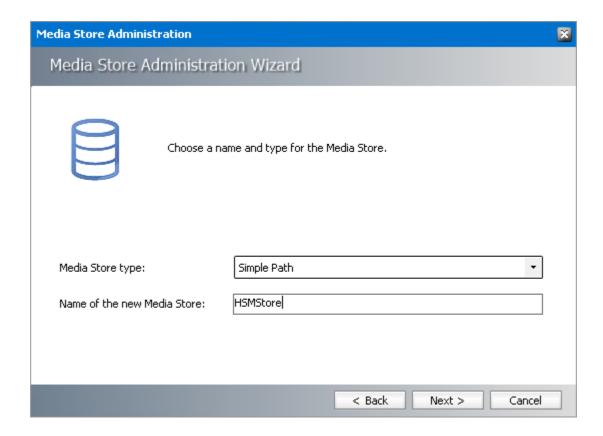
To create a MediaStore – **Simple Path** type, do as follows:

1. In the Configuration tool on the HSM / Stores tab click the New Store button to open the MediaStore Administration wizard.

NOTE: By default Configuration tool can be found under C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig.

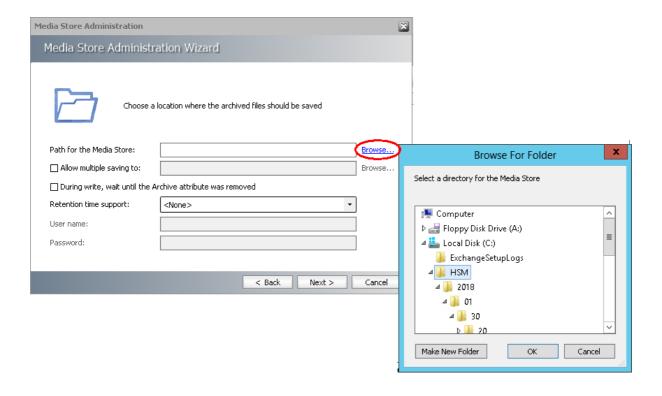


- 2. To configure the MediaStore, select the **Simple Path** option in the dropdown.
- 3. Then enter a name for your new MediaStore in the Name of the new MediaStore text box. Click Next.



4. Click on the **browse** button next to the **Path of the MediaStore** box to enter the appropriate path to your MediaStore.

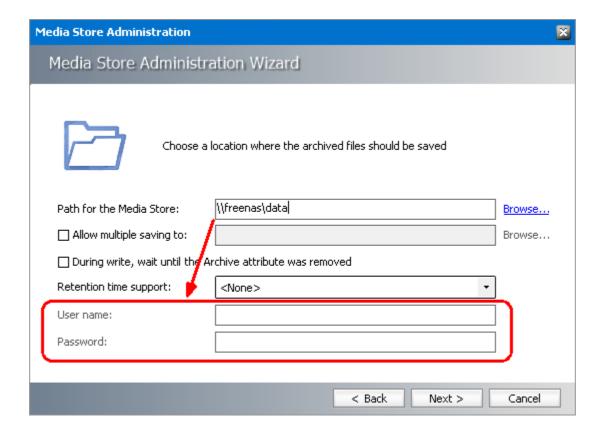
NOTE: To create a new folder, use the **Make New Folder** button. Enter the name for this new folder, e.g. *Store* and click **OK**.



If your MediaStore is a network share, you can specify which **User** (with its **Password**) should access the share. You have to specify the user if:

- your share is not accessible by the user which runs the HSM services;
- you need a different user for each store;
- you want to create more "Simple Stores" accessing network shares; In that situation consider the following:
 - a. Should the network shares be on ONE SERVER, you have to specify the same user for all "Simple Stores".
 - b. Should each "Simple Store" access network share on a DIFFERENT SERVER, you have to specify different user for each Simple Store.

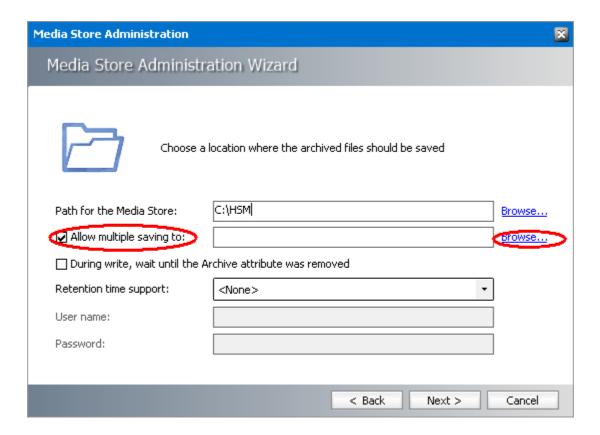
NOTE: The specified user does not need to be a known local user.



5. Should you wish to archive files simultaneously to some other location as well, select the **Activate multiple saving** check-box. Use the **browse** button, similarly as above, to specify a second path.

The files will be archived to this second location, too.

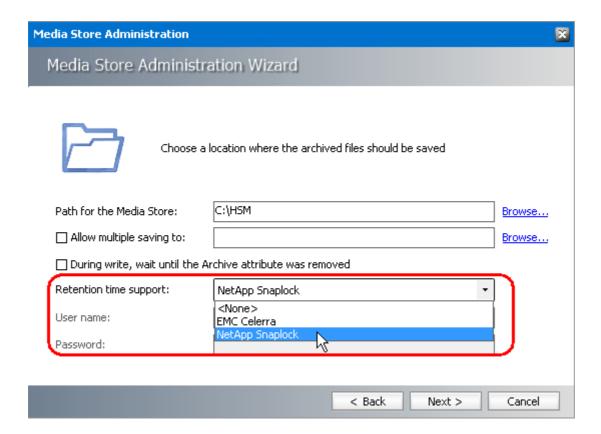
NOTE: The second path can be anything that is reachable by a drive-letter or a network share, something accessible with Windows Explorer.



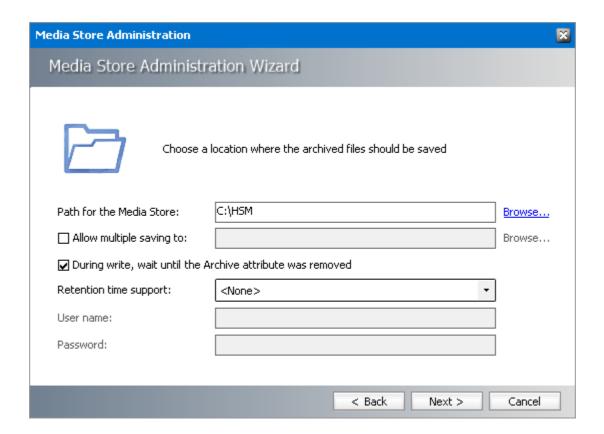
6. In the **Supports Retention-Times** drop-down box select the **NetApp SnapLock** option if you are using NetApp and want to use SnapLock to secure the compliancy with law regulations regarding archiving of electronic documents. (e.g. HIPAA, OFRS, COSO etc.)

In case you are using EMC Celerra and you wish to use its retention times for your archived files, select **EMC Celerra**.

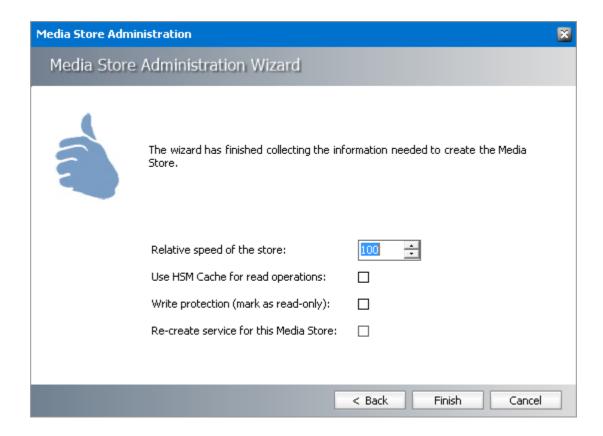
NOTE: In case you are using *multiple saving* and *retention time* support both must be stores supporting the same retention type.



7. If you are storing to SAM-FS (a kind of NAS - Network Attached Storage) check the **During** write, wait until the "archive" attribute was removed check box. With this feature activated you have configured the SAM-FS to remove the "archive" attribute after the file was copied into a safe location (e.g. after it was copied to a tape drive). If you have finished, click **Next**.



- 8. In the following dialog the **Relative speed of the store** text box represents the relative speed of this store compared to other stores.
 - If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**.
 - If this media should be read-only, check **Write Protection** check box. (only supported for "Jukebox, Harddisk, Network" and "Simple Path")
 Click **Finish**.



9. You will be asked to restart the service to apply the changes. To restart, click Yes.

NOTE: Should you be using several MediaStores, you need to repeat all steps as described in this section for each of them.

Having a store ready is not enough. We need at least one schema, which is basically the path to the MediaStore. This schema needs to be registered in the HSM database. For more information on specifying a schema, see the HSM Install and Config Guide.

Simple Foldering Store

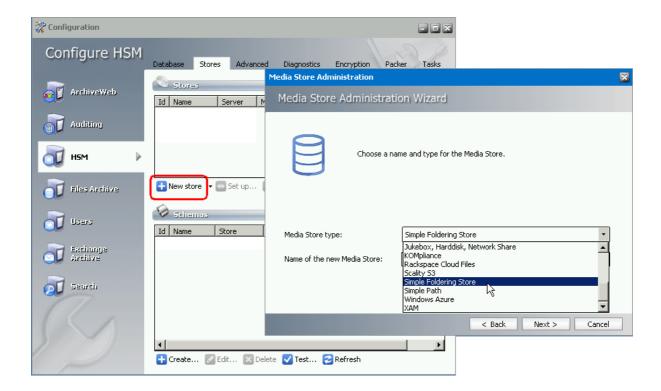
This is the very basic store when just folders are created under the specified path.

1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.

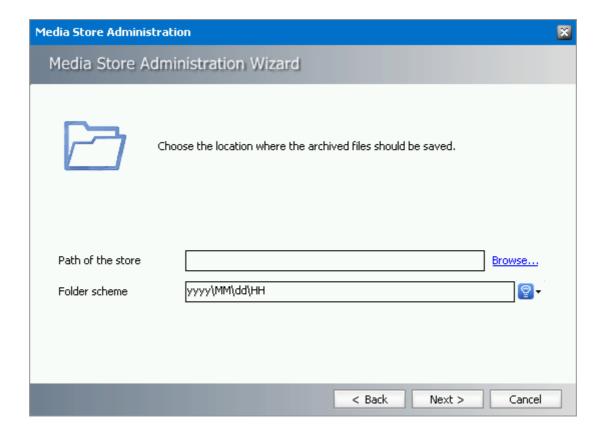
NOTE: By default **Configuration** tool can be found under **C:\Program Files (x86) \ Common Files \ PAM \ PAMConfig.**

2. To create a new media store click the **New store / Create option** located under the Stores list.

 In the MediaStore Administration wizard select Simple Foldering Store as a MediaStore type and enter a name for your new MediaStore in the Name of the new MediaStore textbox. Then click Next.



4. Specify the Path of the store. In the **Filename prefix** box determine the file names to be created. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click **Next.**



5. In the following dialog the **Relative speed of the store** text box represents the relative speed of this store compared to other stores.

If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**.

Click Finish.



6. Click Close in the MediaStore Administration.

Finally restart the MAM HSM BASE STORE OPERATIONS service to apply the settings.

Having a store ready is not enough. We need at least one schema, which is basically the path to the MediaStore. This schema needs to be registered in the HSM database. For more information on specifying a schema, see the HSM Install and Config Guide.

EMC Centera

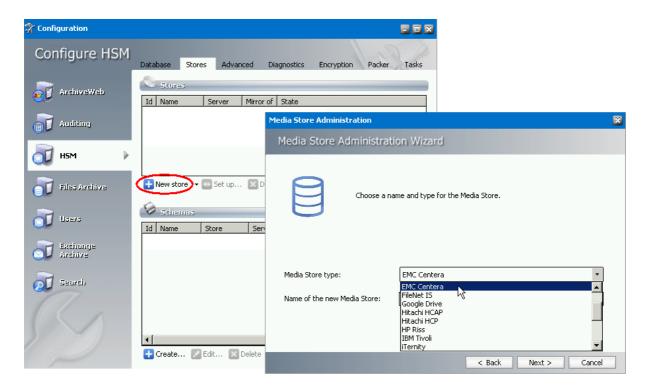
To create EMC-Centera MediaStore:

1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.

NOTE: By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig**.

2. To create a new media store click the **New store / Create option** located under the Stores list.

3. In the **MediaStore Administration** wizard select EMC-Centera as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.



4. In the **Centera IP-Addresses** text box insert all IP-addresses of your Centera Cluster. Use commas to separate IP-addresses.

Examples

"10.2.3.4."

"CenteraNode_1,CenteraNode_2"

"10.2.3.4,10.6.7.8?C:\centera\rwe.pea"

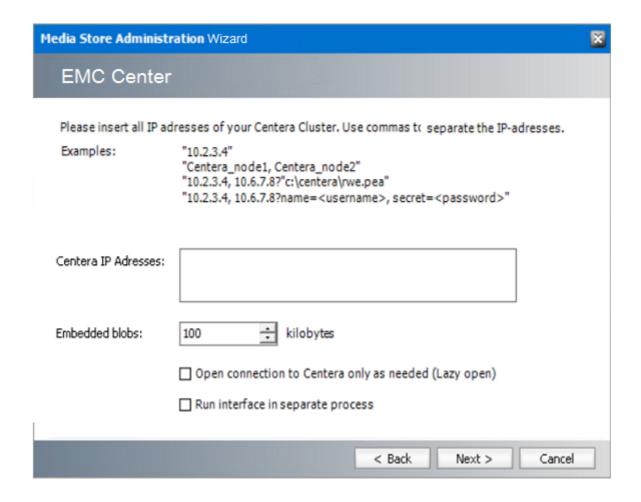
"10.2.3.4,10.6.7.8?name=<username>,secret=<password>"

It is possible to let the Centera Connection run in its own process (**Run interface in own process**). That way, two different connections to Centera won't affect each other. If a connection is broken, the whole connection (running in its own process) can be restarted, without the need to restart HSM.

Embedded Blobs - Normally if the Centera stores a file it creates two files internally (one CDF file which contains the meta-data and a second file for the data itself). This means that each file increments the file-count on the Centera by two. If you store lots of small files, the Centera can run out of "file-count" before it runs out of disk space. With these settings the data up to the set size is embedded in the meta-data file. (Internally this is a XML file and the data is saved as a base 64 encoded data)

If **Open connection to Centera only as needed (Lazy open)** is checked, the connection to the Centera is opened at the very latest moment possible. This is done by the Centera SDK itself and is a setting recommended by EMC.

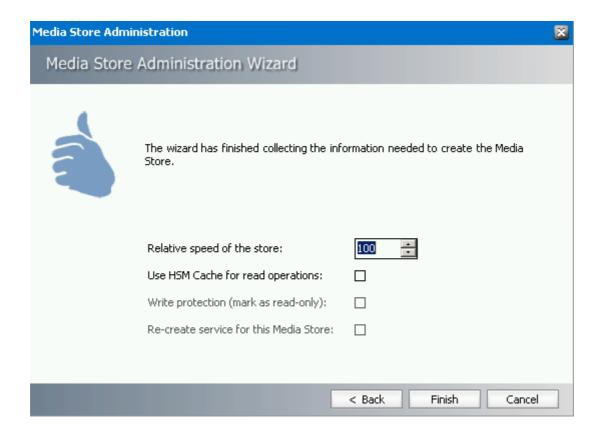
Click Next.



5. In the following dialog the **Relative speed of the store** text box represents the relative speed of this store compared to other stores.

If HSM should copy files into the cache when reading from this store, check **Use HSM Cache** for read operations.

Click Finish.



6. Click Close in the MediaStore Administration.

Finally restart the MAM HSM BASE STORE OPERATIONS service to apply the settings.

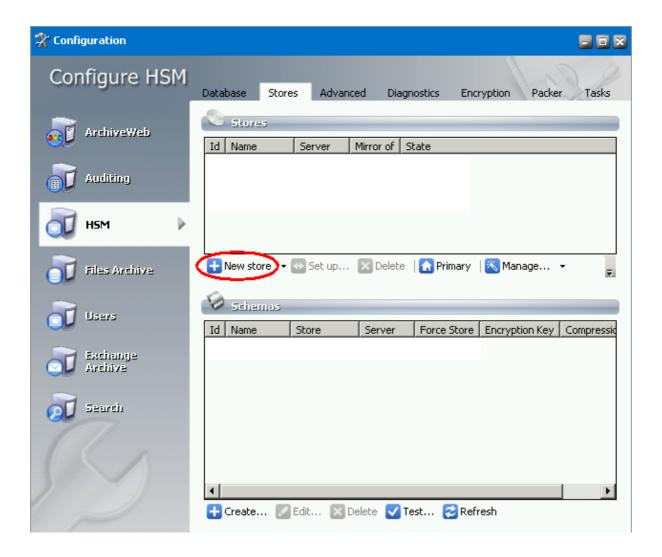
Having a store ready is not enough. We need at least one schema, which is basically the path to the MediaStore. This schema needs to be registered in the HSM database. For more information on specifying a schema, see the HSM Install and Config Guide.

IBM-Tivoli

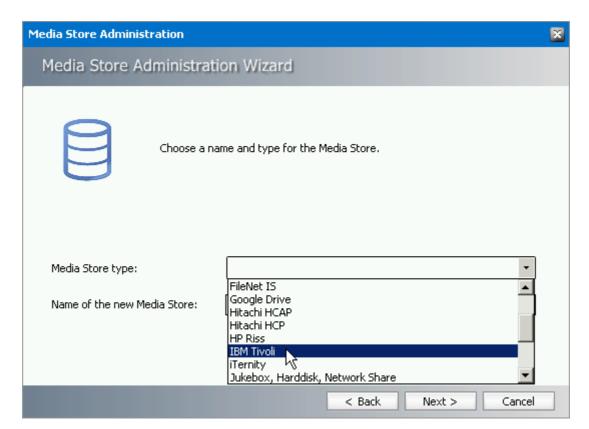
To create IBM-Tivoli MediaStore:

1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.

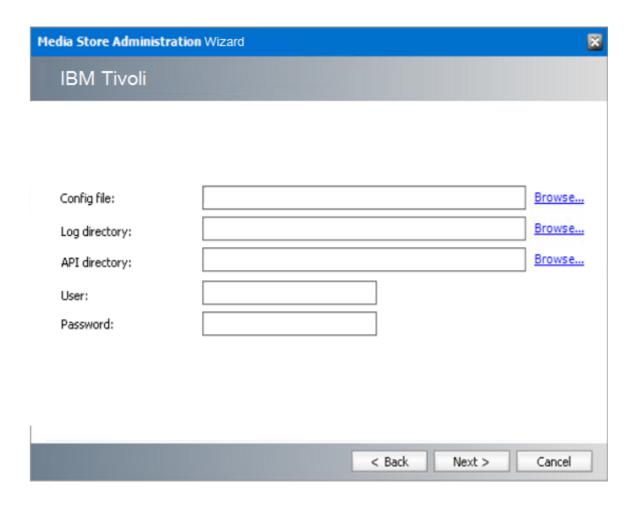
NOTE: By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig.**



2. In the **MediaStore Administration** wizard select IBM-Tivoli as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.



3. Specify your settings: **Config File** - enter the path of the config-file. **Log Directory** - enter the directory where HSM should do its logging for TSM. **API Directory** - enter the path where the API (32-bit) is installed. Finally enter the name of the **User** to be used for connecting and its **Password**.



4. In the **Management Class** text box define where it is saved in Tivoli Storage Manager ("TSM")

(more info

http://publib.boulder.ibm.com/infocenter/zvm/v5r4/index.jsp?topic=/com.ibm.zvm.v54.hcpt1/hcsm1b3025.htm).

Node - defines where the data is stored.

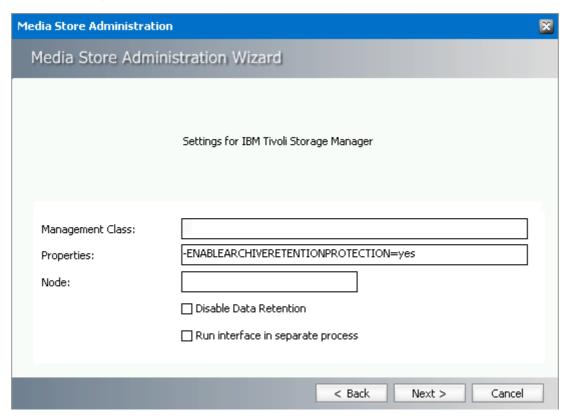
Properties - any property supported by TSM can be entered here, the only setting which is mandatory for HSM is the "enable archive retention protection" if data retention is used.

Check Disable Data Retention check box if:

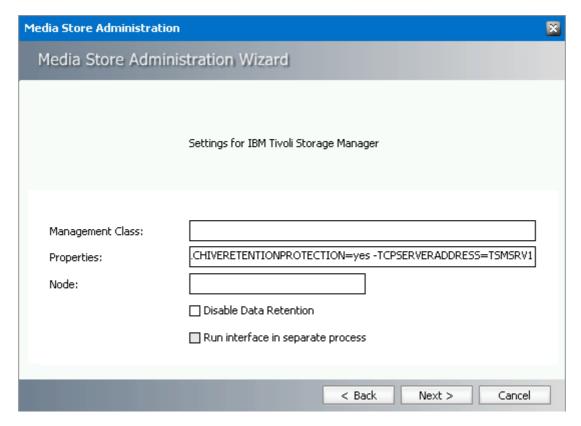
- you do not have a license (e.g. if you just store on a tape and do not need that protection)
- the installation of TSM does not support Data Retention Mode **NOTE**: If a TSM system requires data-retention (e.g. DR550), do NOT check this check box.

It is possible to let the IBM-Tivoli Connection run in its own process (**Run interface in own process**). That way, two different connections to Tivoli won't affect each other. If a

connection is broken, the whole connection (running in its own process) can be restarted, without the need to restart HSM.



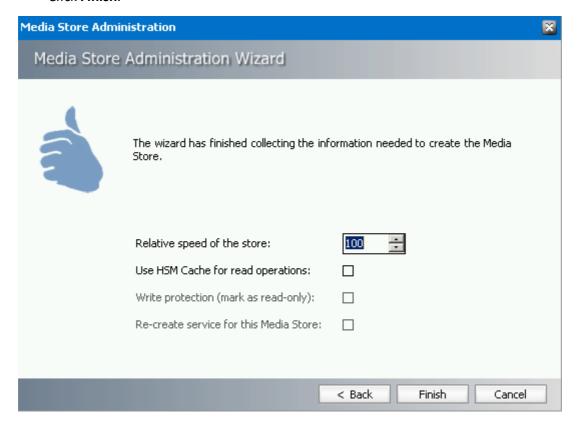
If HSM uses more Tivoli Storage Managers, each storage configuration must contain TCPSERVERADDRESS option to specify TSM sever address (e.g. - TCPSERVERADDRESS=TSM1)



5. In the following dialog the **Relative speed of the store** text box represents the relative speed of this store compared to other stores.

If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**.

Click Finish.



6. Click **Close** in the **MediaStore Administration**. The MediaStore is ready.

Finally restart the MAM HSM BASE STORE OPERATIONS service to apply the settings.

Having a store ready is not enough. We need at least one schema, which is basically the path to the MediaStore. This schema needs to be registered in the HSM database. For more information on specifying a schema, see the HSM Install and Config Guide.

HP Integrated Archive Platform

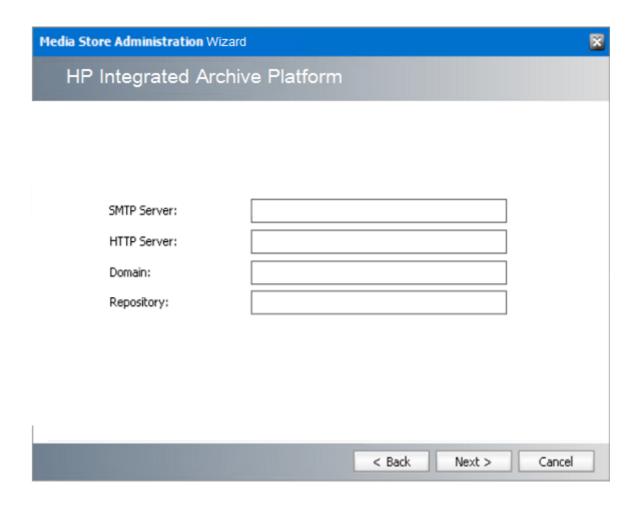
To create HP Integrated Archive Platform:

1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.

NOTE: By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig**.

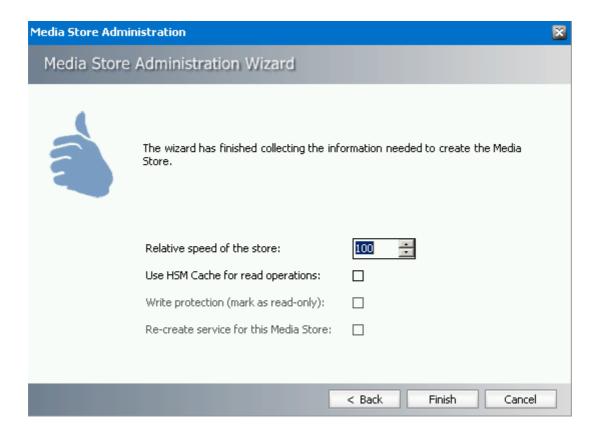
- 2. In the **MediaStore Administration** wizard select **HP Riss** as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.
- 3. Enter your SMTP Server name, HTTP Server name, Domain and Repository in the relevant text boxes.

NOTE: For testing without a real HP Integrated Archive Platform use a local path as SMTP Server.



4. If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**. **Relative speed of the store** text box represents the relative speed of this store compared to other stores.

Click Finish.



5. Click **Close** in the **MediaStore Administration**. The MediaStore is ready.

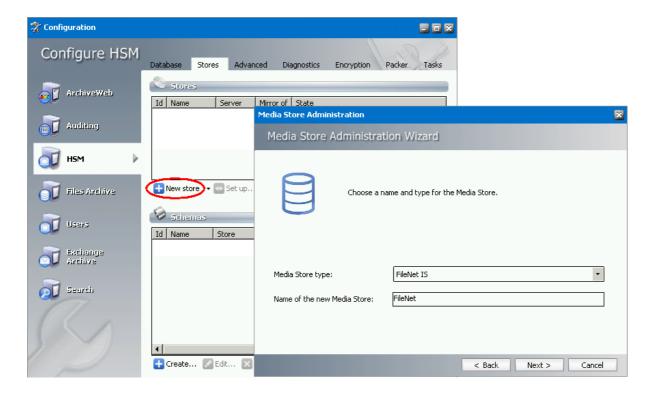
Finally restart the MAM HSM BASE STORE OPERATIONS service to apply the settings.

Having a store ready is not enough. We need at least one schema, which is basically the path to the MediaStore. This schema needs to be registered in the HSM database. For more information on specifying a schema, see the HSM Install and Config Guide.

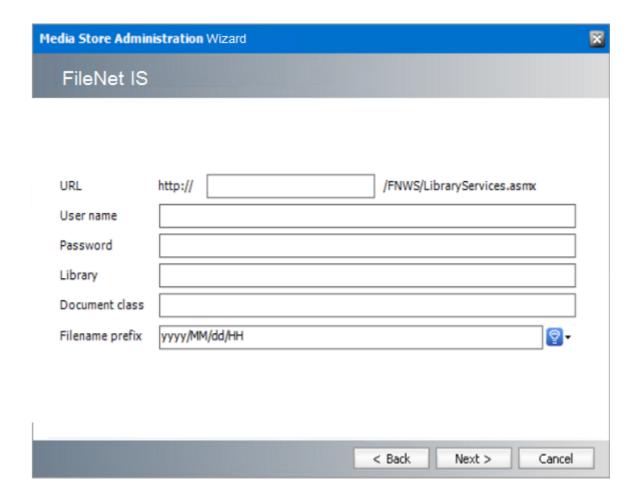
FileNet IS

To create IBM FileNet Image Services (IS) Store:

- 1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.
 - **NOTE:** By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig.**
- 2. In the **MediaStore Administration** wizard select FileNet IS as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.

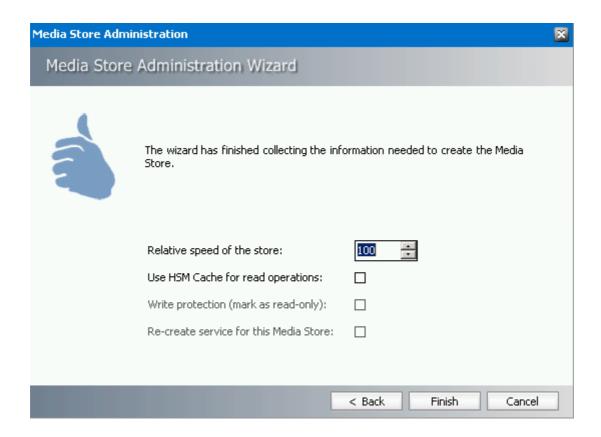


3. Specify your settings: **URL** - enter the address of your FileNet store. **User name** - enter the name of the user to be used for connecting and its **Password. Library** – enter the storage library device. **Document class** – enter the document class for connecting to the FileNet store. In the **Filename prefix** box determine the file names to be created. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click **Next.**



4. The final dialog is common for every store type. The **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.

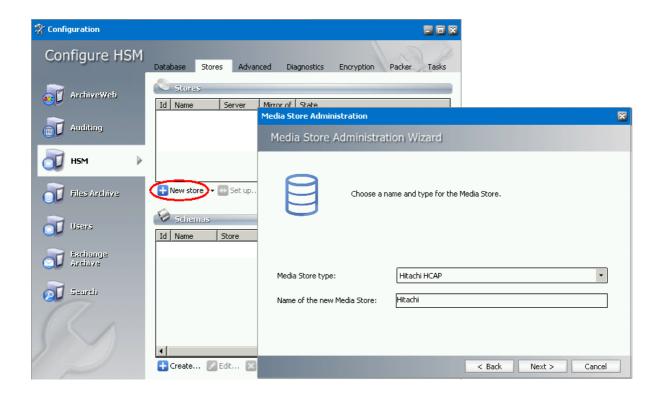
If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**. Click **Finish**.



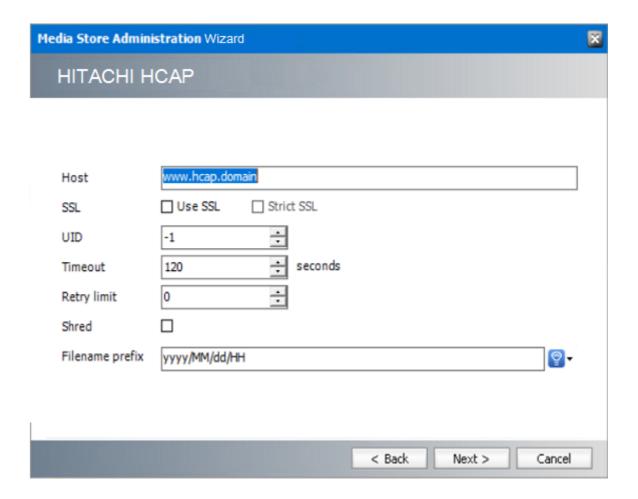
Hitachi HCAP (Content Archive Platform)

To create Hitachi HCAP Store:

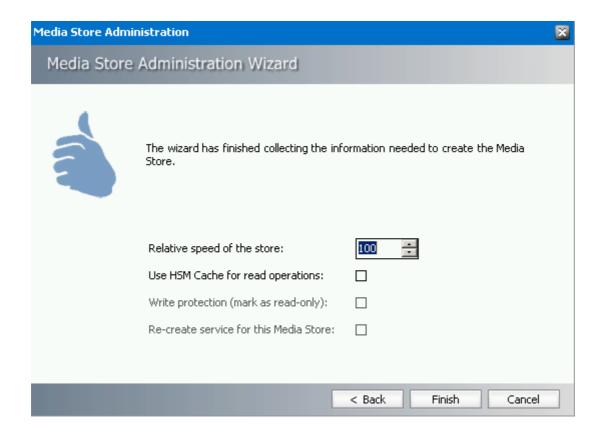
- 1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.
 - **NOTE:** By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig.**
- 2. In the **MediaStore Administration** window select Hitachi HCAP as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.



3. Specify your settings: Host – enter your specific host name. SSL – tick, if you want to use SSL Certificate. UID – enter the user identifier numerical value, e.g. File System User ID, Superuser ID (0). Timeout – set the desired value. Retry limit – set how many times the store should try to save a file. Shred – tick, if you want to allow secure file deletion. In the Filename prefix box determine the file names to be created. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click Next.



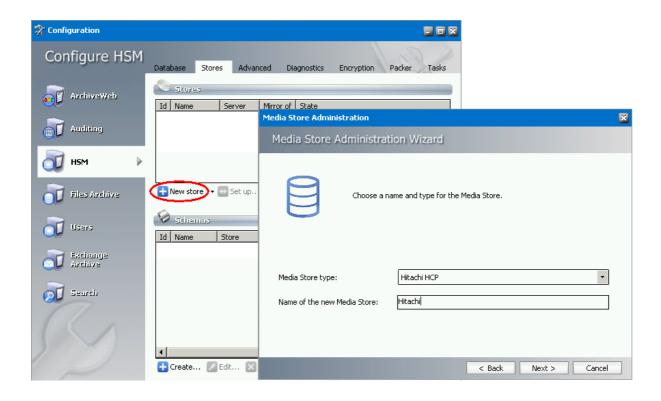
- 4. The final dialog is common for every store type. The **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.
 - If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**. Click **Finish**.



Hitachi HCP

To create Hitachi HCP Store:

- 1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.
 - **NOTE:** By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig**.
- 2. In the **MediaStore Administration** window select Hitachi HCP as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.



3. Specify your settings: **Host** – enter your specific host name. **Host** address format:

namespace-name.tenant-name.hcp-domain-name

Tenant is the highest node of the storage folder structure. There can be one or more tenants defined. Each tenant can be defined in enterprise or compliance retention-mode. In enterprise mode, privileged operations are allowed. In compliance mode, they are not allowed. E.g. when tenant name = company name, there can be another tenant defined in compliance mode.

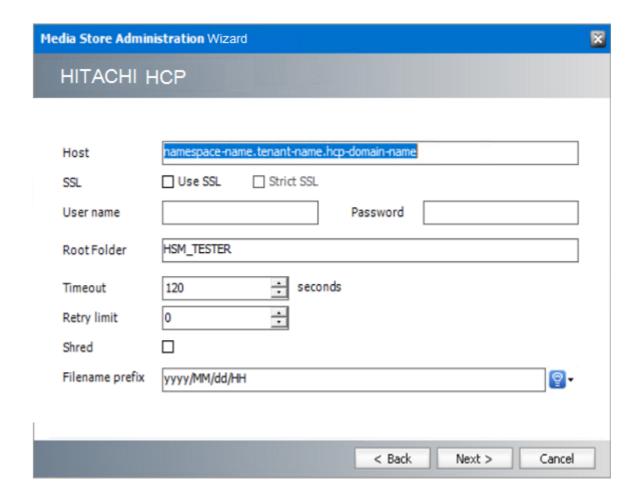
Each tenant can have one or more namespaces defined (e.g. departments – sales, development...)

SSL—tick, if you want to use SSL Certificate. **User name & Password**—to be filled as they are sent for authorization reasons with every request. **Timeout**—set the desired value. **Retry limit**—set how many times the store should try to save a file. **Shred**—tick, if you want to allow secure file deletion (file will be deleted and all existing references in storage will be overwritten).

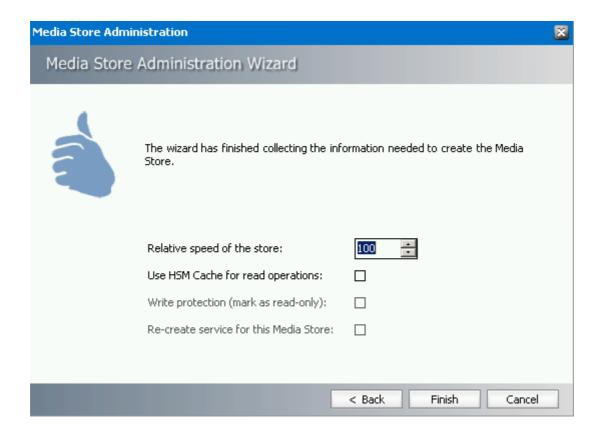
In the **Filename prefix** box determine wished date/time folder structure of archived files (the file names to be created). Click the button right next to the text box to add datepart to the file name. Custom text is also available. In case of example screenshot, folder where files will be archived has the following structure:

RootFolder/FileNamePrefix where FileNamePrefix (yyyy/MM/dd/HH)

date/time parts will be substituted through actual date/time. Then click **Next.**



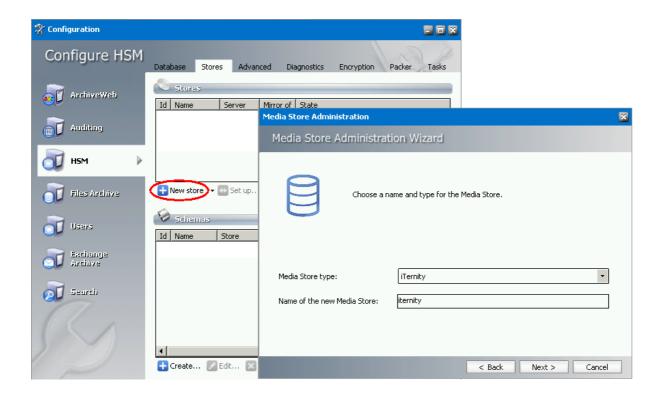
- 4. The final dialog is common for every store type. The **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.
 - If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**. Click **Finish**.



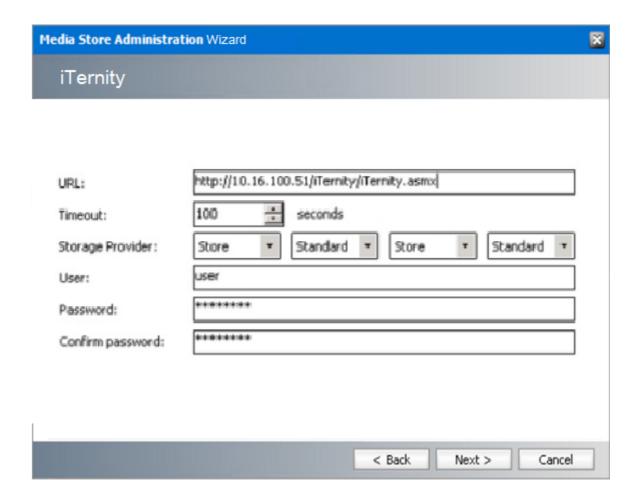
iTernity

To create iTernity Store:

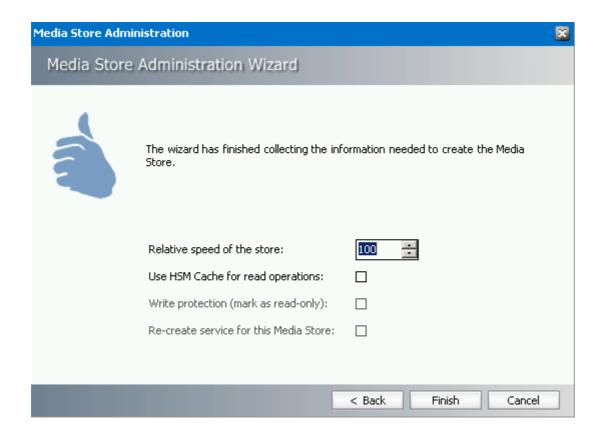
- 1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.
 - **NOTE:** By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig.**
- 2. In the **MediaStore Administration** window select iTernity as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.



3. Specify your settings: **URL** – enter your specific URL. **Timeout** – set the desired value. **Storage Provider** – enter your storage provider settings. **User** – enter the name of the user to be used for connecting and its **Password**. Then click **Next**.



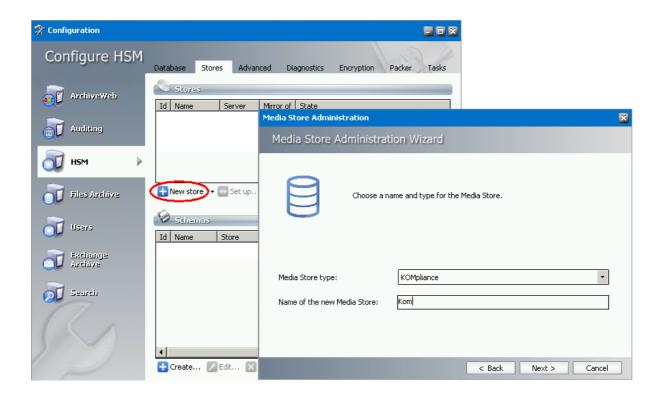
- 4. The final dialog is common for every store type. The **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.
 - If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**. Click **Finish**.



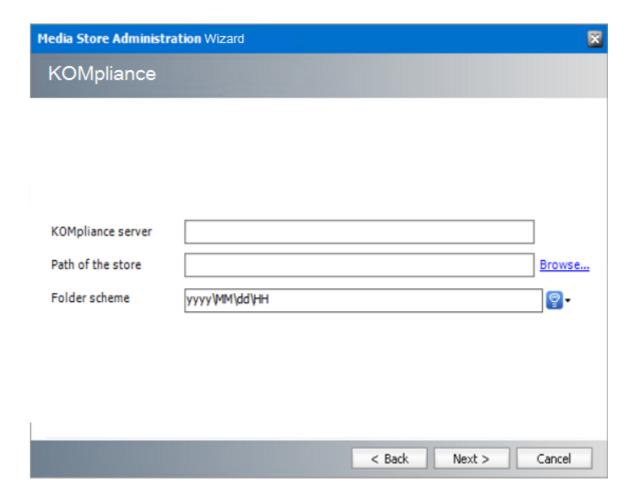
KOM Networks KOMpliance

To create KOMpliance store:

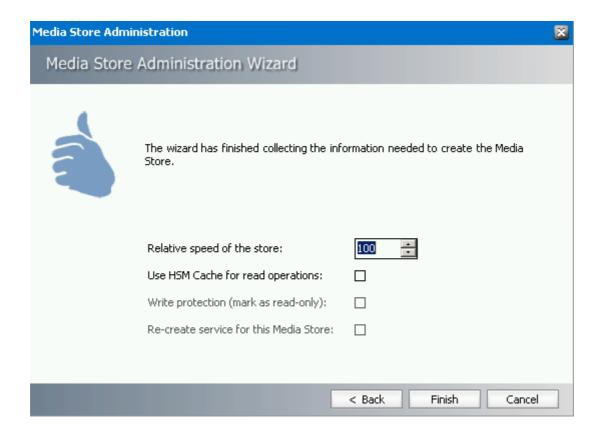
- 1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.
 - **NOTE:** By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig**.
- In the MediaStore Administration window select KOMpliance as a MediaStore type and enter a name for your new MediaStore in the Name of the new MediaStore text-box.
 Then click Next.



3. Specify your settings: **KOMpliance server** – enter your specific KOMpliance server name. Browse the **Path of the store.** In the **Folder scheme** box determine the folder names to be created. The naming is based on the current date and time and enables granularity of milliseconds. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click **Next.**



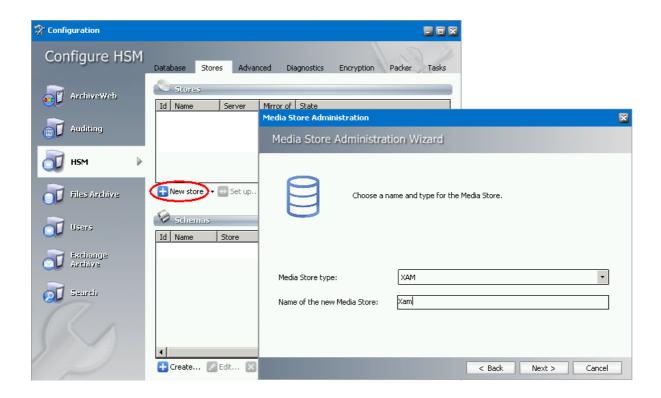
- 4. The final dialog is common for every store type. The **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.
 - If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**. Click **Finish**.



XAM

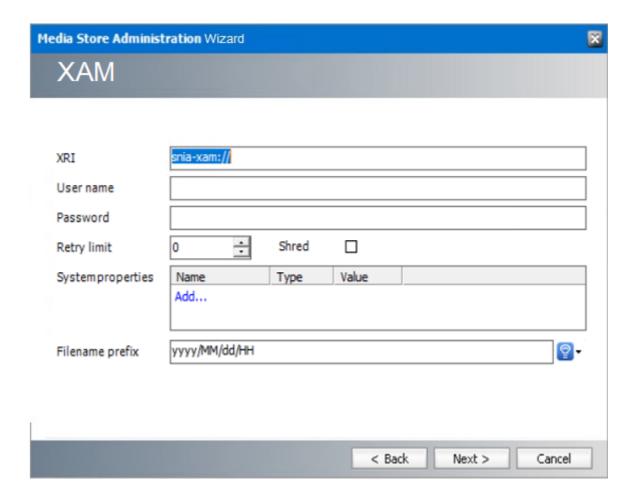
To create XAM store:

- 1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.
 - **NOTE:** By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig.**
- 2. In the **MediaStore Administration** window select XAM as a **MediaStore type** and enter a name for your new MediaStore in the **Name of the new MediaStore** text-box. Then click **Next**.

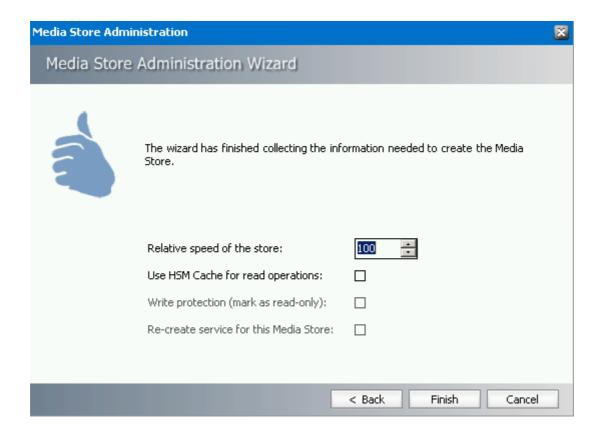


3. Specify your settings: XRI – enter your specific path of XRI store. User name – enter the name of the user to be used for connecting and its Password. Retry limit – set how many times the store should try to save a file if any issue occur. System properties – add your system properties.

In the **Filename prefix** box determine the file names to be created. The naming is based on the current date and time and enables granularity of milliseconds. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click **Next.**



- 4. The final dialog is common for every store type. The **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.
 - If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**. Click **Finish**.

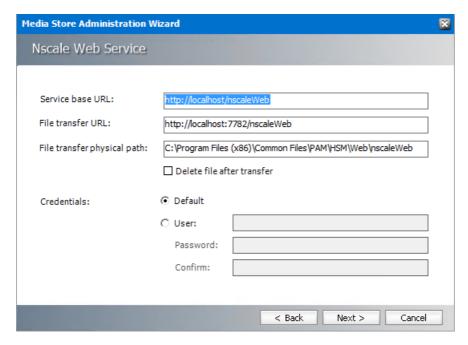


nscale

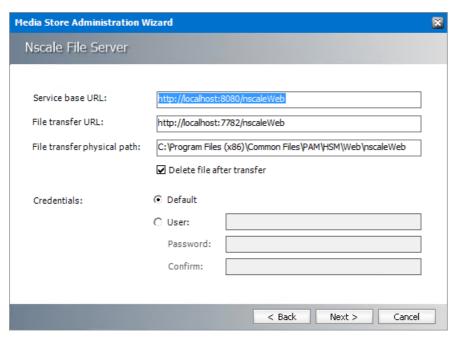
nscale from Ceyoniq Technology is an information platform that offers simple and robust document archiving. You can choose from two different options to integrate with nscale Web services or the nscale windows server.

To integrate HSM with nscale:

1. From the Media store drop down select one of the following:

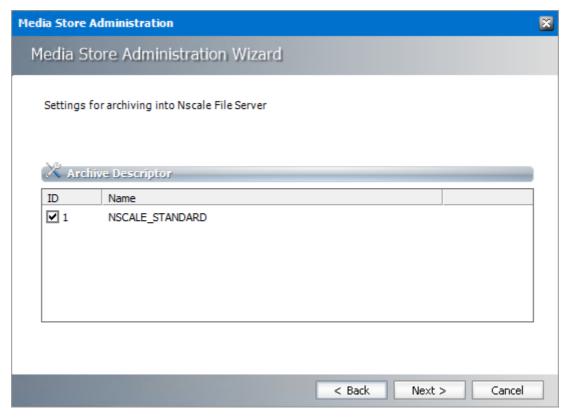


or

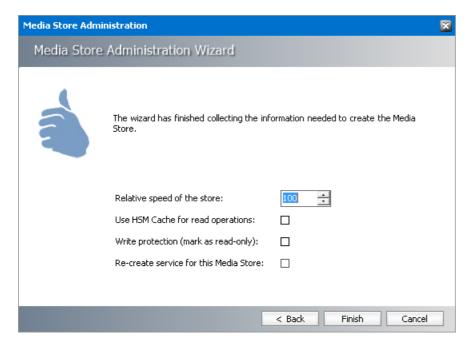


- 2. Enter the information as described below:
 - a. Service base URL Enter the URL of your NSCALE Server in the format http://<nscale-webserver>:8080/nscaleweb
 - b. **File transfer URL** Enter the URL of the HSM server to transfer the document between HSM and nscale server in the format http://<hsm-server>:7782/nscaleweb
 - c. **File transfer physical path** Specify the path of the temporary Folder on the HSM Server where the file will keep during the transfer process.
 - d. **Delete File after transfer** If checked, the file will be deleted from the above path once the file is transferred to the nscale server.

- e. **Credentials**: **Default** If selected, the web request will be authenticated using the credentials of the currently logged-on user.
- f. **Credentials**: **User** If selected, the web request will be authenticated using the username entered in the adjacent field.
 - i. Password password of the user.
 - ii. **Confirm** re-enter the password to confirm.
- 3. Click **Next**. The Settings window for the nscale server opens.



- 4. Select the default **ID** check box.
- 5. Click **Next**. The *HSM settings* window for this media store opens.



- a. **Relative speed of the store** relative speed of this store compared to other stores.
- b. **Use HSM Cache for read operations** If checked HSM will copy files into the cache when reading from this store.
- c. Write Protection (mark as read only) not used. (only supported for Jukebox, Harddisk, Network Media and Simple Path)
- d. Re-create service for this media store not used.
- 6. Click **Finish** to complete the nscale integration.

Cloud Media Stores

Specific type of stores that can be created in Configuration tool are cloud stores. This chapter describes available cloud stores one by one.

Directory Creation Rules

Most of the cloud stores are using flat file system, i.e. no directory structure creation is supported. However, some of them allow hierarchical file names imitating folder structure, e.g. 2011/11/23/file.txt.

The rules of the creation of the subdirectories resp. hierarchical file names are configurable. The naming is based on the current date and time and enables granularity of milliseconds. The naming scheme is specified in format:

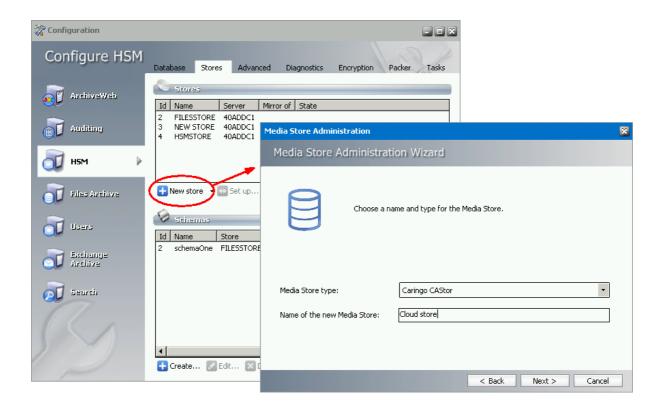
yyyy\MM\dd\HH\mm\ss\fff

Of course, an arbitrary substring can be added to the format string. By specifying the certain fractions of the time in the format string, the frequency of subdirectory creation, thus indirectly the number of files stored in a directory can be affected.

How to install

Install and configure HSM (see the step by step description in the HSM Install and Configuration manual). When it comes to Stores configuration, access to your cloud store will be defined:

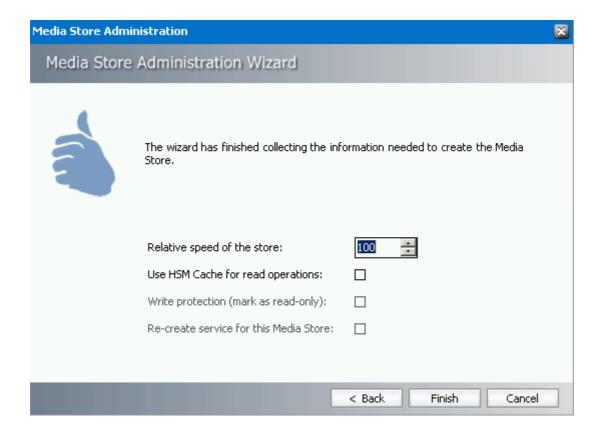
- 1. Click the **New store** button.
- On the first dialog of the MediaStore Administration Wizard choose the MediaStore type, i.e. the store to be used, in the dropdown box and enter any Name in the text box below. Click Next.



- The next dialog of the wizard is specific for each cloud store type for particular store configuration options description see the next section. When the cloud store configuration is finished, click **Next**.
- 4. The final dialog is again common for every store type.

 The **Relative Speed of the store** text box represents the relative speed of this store compared to other stores.
 - If HSM should copy files into the cache when reading from this store, check **Use HSM Cache for read operations**.

Click Finish.



Specific Cloud Storage Configuration Options

Configuration options for each type of cloud store are different. As mentioned in the previous section, the second dialog of the wizard is specific for the selected could store. Further we depict configuration options of individual cloud stores.

Rackspace Cloud Files

This store allows hierarchical file names imitating folder structure.

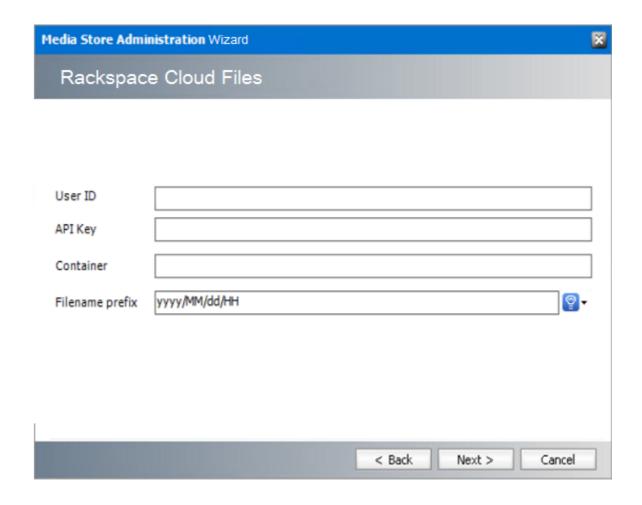
To set up the connection enter your Rackspace store credentials:

User ID

API Key

Container

In the **Filename prefix** box determine the file names to be created. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click **Next**.



Caringo CAStor

This store does not support hierarchical names.

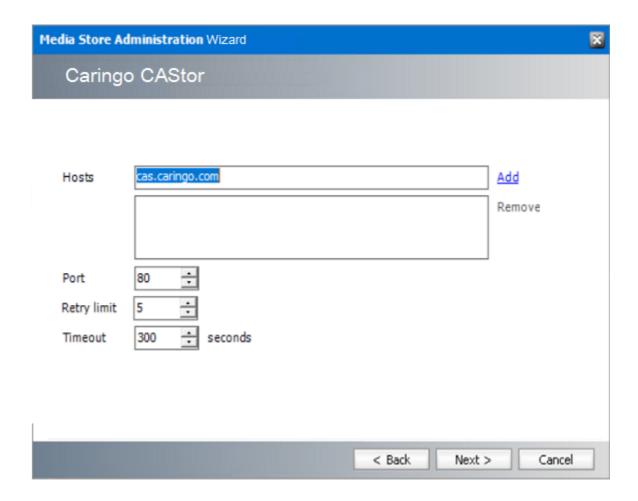
To set up the connection specify your settings:

Hosts – enter your specific host name and click Add (Host can be also removed from the list by selecting it and clicking Remove.)

Port – set the port for the communication with the cloud

Retry limit – set how many times the store should try to save a file

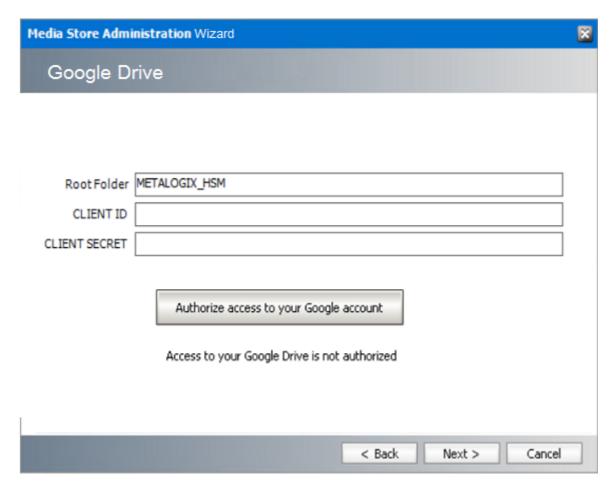
Timeout – set the desired value



Google Drive

NOTE: To use Google Drive store .NET Framework 4.5 is required on the HSM Server. If you install .NET Framework after HSM, it is necessary to run the HSM setup once more in the "Repair" mode. Only then the Google Drive will be available.

The first configuration dialog contains the name of the **Root Folder** which will be automatically created for stored items. It can be customized if desired.



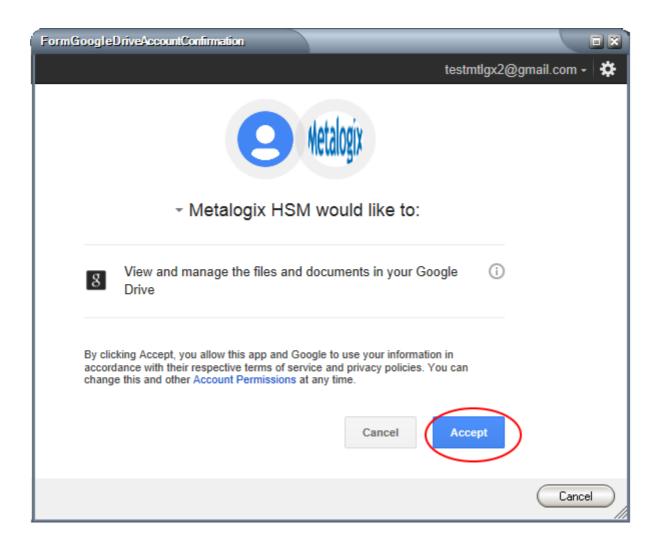
Further, to access a Google Drive by HSM, you will need an account for Google Drive. In order to connect to Google, Drive Client ID and Client Secret values are necessary.

How to create the Client ID and Client Secret values:

- Login to the Google Developers console at https://console.developers.google.com/project
- 2. Create new project.
- 3. Expand "APIs & auth" in the left pane and select APIs.
- 4. Turn on the following APIs: Drive API.
- 5. Select **Credentials** from the left pane.
- 6. Under the OAuth section, click Create new Client ID.
- 7. Select Installed application, then click Create Client ID.

After entering the Client ID and Client Secret values, click the **Authorize access...** button.

You will be asked to enter your Google Drive credentials. After signing in press **Accept** button and confirm access to your Google Drive account for application.



After that step, the confirmation text appears: "Your Google Account was successfully authorized". Click **Next** and finish the configuration.

EMC Atmos

Hierarchical names are supported.

To set up the connection enter your connection specifications:

URL

UID

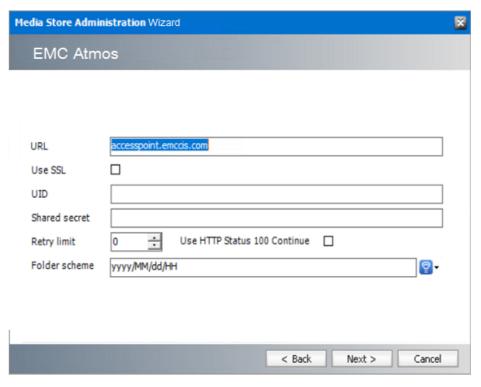
Shared secret

Then enter your preferred specifications:

Retry limit – set how many times should the store try to save a file

Use HTTP Status 100 continue - use the check box for request header when creating or updating namespace objects

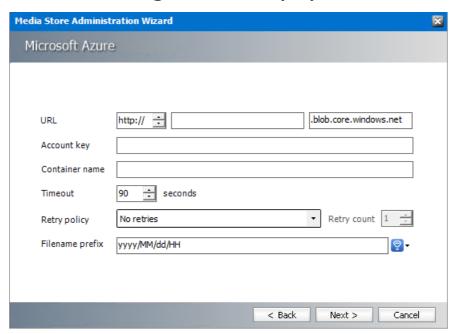
Folder scheme - in this box determine the file names to be created. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click Next.



Microsoft Azure

Azure Blob Storage is the Microsoft object storage solution for the cloud. This store allows hierarchical file names imitating a folder structure.

Azure Blob Storage connection properties



URL - the base address for the objects in your storage account that is the combination of the account name and the Azure Storage blob endpoint forms. You can enter the **account name** in the field and change the protocol between **http** or **https**.

Account key - the account key for your storage account. You can use either of the two keys to access Azure Storage, but in general it's a good practice to use the first key, and reserve the use of the second key for when you are rotating keys.

Container name - name of the container that you have created to organizes the set of blobs, similar to a directory in a file system.

Timeout - set the desired timeout value.

Retry policy - choose the behavior from the available options.

Retry count - set how many times the store should try to save a file

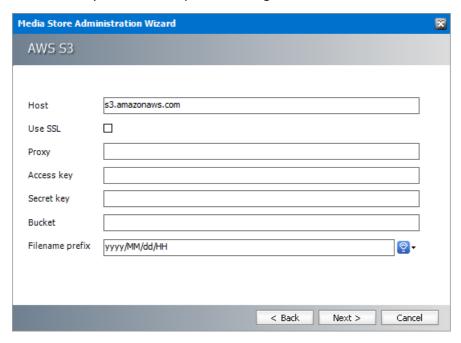
Filename prefix - configure the file name prefix to be used. Click to select a date format. You can add custom text as well.

To test you azure connection data, go to https://www.myazurestorage.com and enter the account name and account key. Under the BLOBs menu you will see your stored files under a container.

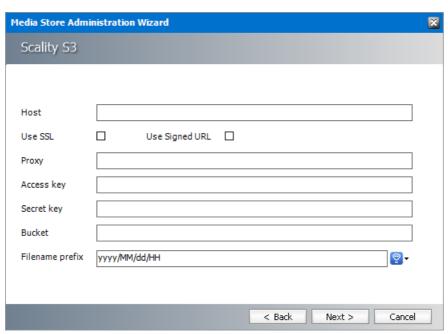
AWS S3 or Scality S3

This store allows hierarchical file names imitating folder structure.

AWS S3 or any other S3 Compatible Storage



Scality S3



To set up the connection enter your AWS S3 store credentials:

Host - FQDN of the S3 host server.

Use SSL - select this check box to use SSL

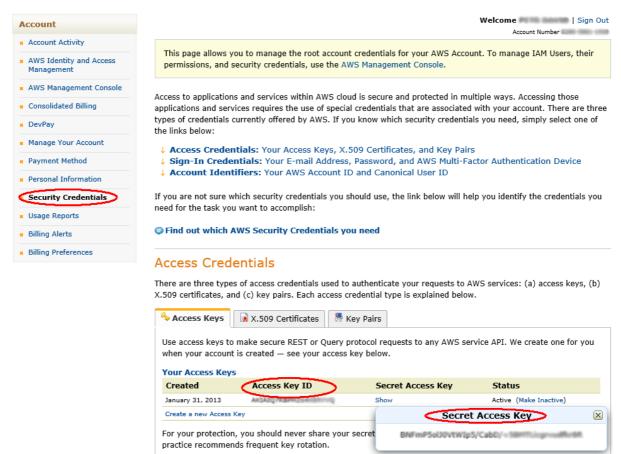
Use Signed SSL - only for Scality S3. Select this box to use a self signed certificate for your local Certificate Authority

Proxy - FQDN of the proxy server if there is a proxy server that is used in your organization to access external web servers.

Access Key and Secret Key - unique to a customer. This information can be found on Account Management portal under the Security Credentials (see the screenshot below).

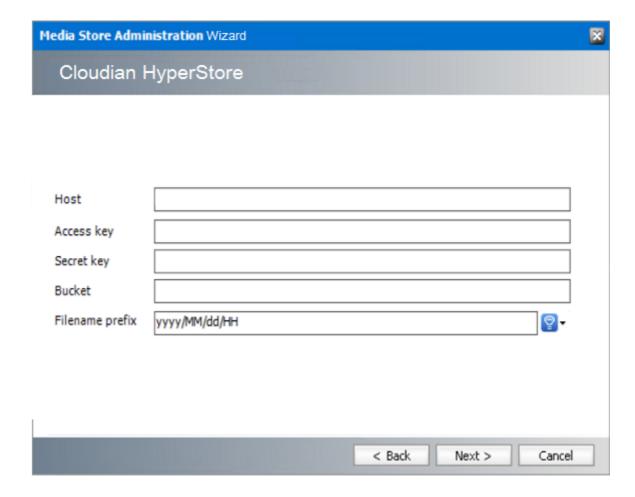
Bucket - needs to be created first and the desired name should be provided when configuring the media store.

Filename prefix - determine the file names to be created. Click the button right next to the text box to add date part to the file name. Custom text is also available. Then click **Next**.



Cloudian Hyperstore

This store allows hierarchical file names imitating folder structure.



To set up the connection enter your Cloudian Hyperstore credentials in the **Host** field.

The **Access Key** and **Secret Key** is unique to a customer. For more information on this data, see the Cloudian documentation.

It is recommended to create the **Bucket** first and then the desired name should be provided when configuring the media store.

In the **Filename prefix** box determine the file names to be created. Click the button right next to the text box to add datepart to the file name. Custom text is also available. Then click **Next**.

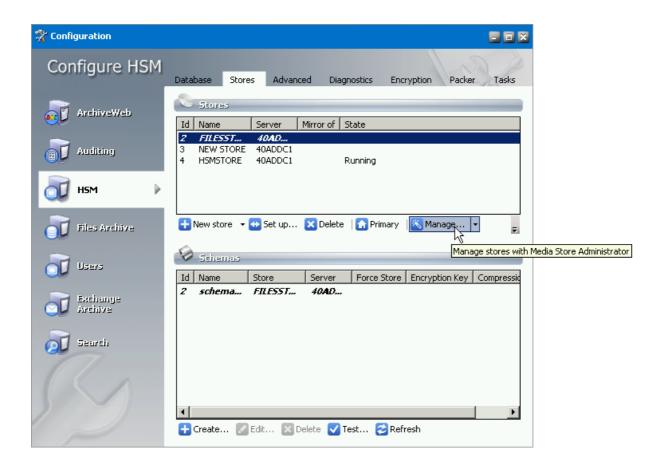
Modifying Media Store Settings

To modify the store settings:

1. In the **Configuration** tool on the **HSM / Stores** tab click the **New Store** button to open the *MediaStore Administration* wizard.

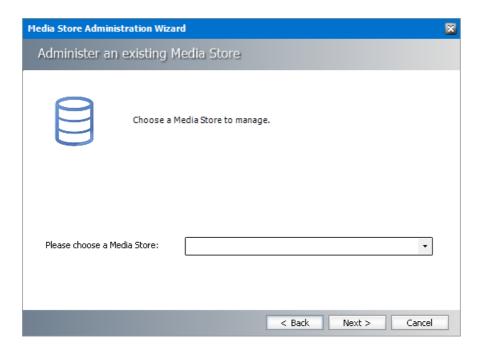
NOTE: By default **Configuration** tool can be found under **C:\ Program Files (x86) \ Common Files \ PAM \ PAMConfig.**

2. On the **HSM / Stores** tab select the desired store from the Stores list view. Then click **Manage** button.



3. In the down-drop box select the MediaStore which you want to modify and click **Next** to continue.

To get more information about specific settings for different MediaStore types read the relevant chapter in this manual.

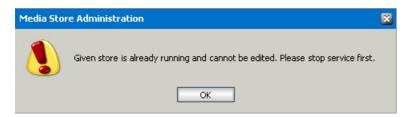


Sometimes a warning message can appear. MediaStore CANNOT be modified when being used. "Jukebox, Harddisk, Network" MediaStore type has to be stopped first. Only then it can be modified.

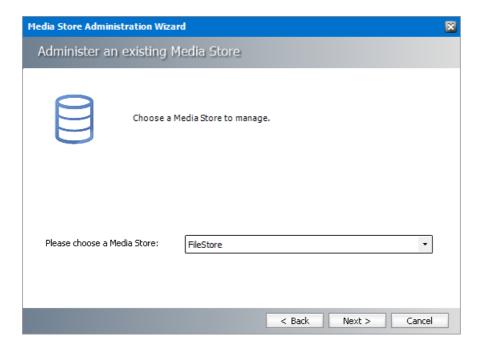
NOTE: All other kinds of stores run directly in HSM. For this reason HSM must be restarted after the changes have been applied. To do so, click OK when prompted to restart the **MAM HSM BASE OPERATIONS** service after modifying the MediaStore.

To stop the "Jukebox, Harddisk, Network" MediaStore:

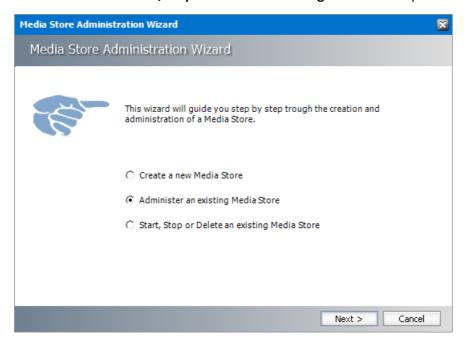
1. When a warning message appears, click **OK**.



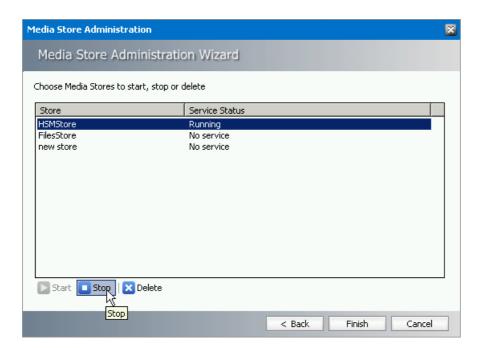
2. Then in the MediaStore Administration wizard click Back.



3. Select the Start, Stop or Delete an existing MediaStore option and click Next.



4. In the **MediaStore Start, Stop or Delete** window select the store which you want to modify. Then click on the **Stop** button.



5. The service status for the store will change to STOPPED. Click **Close**. Now the store settings can be modified (see further).



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Quest creates software solutions that make the benefits of new technology real in an increasingly complex IT landscape. From database and systems management, to Active Directory and Office 365 management, and cyber security resilience, Quest helps customers solve their next IT challenge now. Around the globe, more than 130,000 companies and 95% of the Fortune 500 count on Quest to deliver proactive management and monitoring for the next enterprise initiative, find the next solution for complex Microsoft challenges and stay ahead of the next threat. Quest Software. Where next meets now. For more information, visit www.quest.com.

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- Chat with support engineers online
- View services to assist you with your product