

STORAGE AREAS AND RULES

ADMINISTRATION TOOL

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GENERAL INFORMATION AND BASIC CONCEPTS

WHAT IS A STORAGE AREA?

A storage area is a local or network location where all or part of the files from one or more Gargantua databases are stored, formatted and divided into customizable folders and subfolders.

For example, you may store all the files under 20 kB from “Accounting” and “Mail” databases in a set of large files containing several files, each of them corresponding to a CD-R capacity. You may also store all the image files from your databases in subfolders containing a fixed and customizable number of files so as to optimize accurately access time, according to server performance.

WHAT IS A STORAGE RULE?

Storage rules provide a link between Gargantua database files that meet some requirements and the relevant storage area, in order to send the right files to the right place.

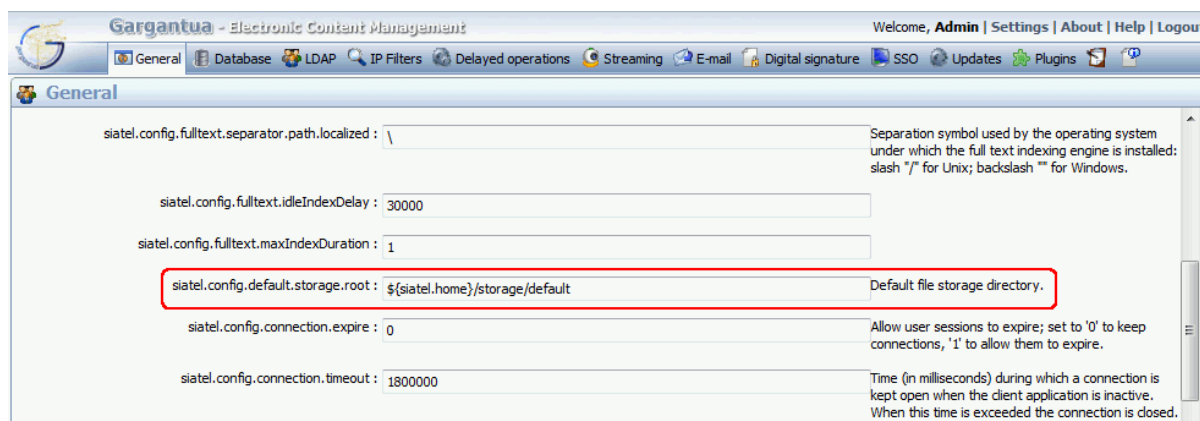
Except for Optical media storage storage areas, all the storage areas need to be assigned to one or more storage rules. Otherwise, they cannot store any file.

For example, if you want to store “Accounting” and “Mail” databases files under 20 kB as aggregated files, you need to create an “Aggregated file storage” storage area AND two storage rules that will associate all the database files meeting the “Size <= 20 000 bytes” requirement to the storage area.

WHAT STORAGE AREA AND TYPE DOES GARGANTUA USE BY DEFAULT?

DEFAULT STORAGE AREA

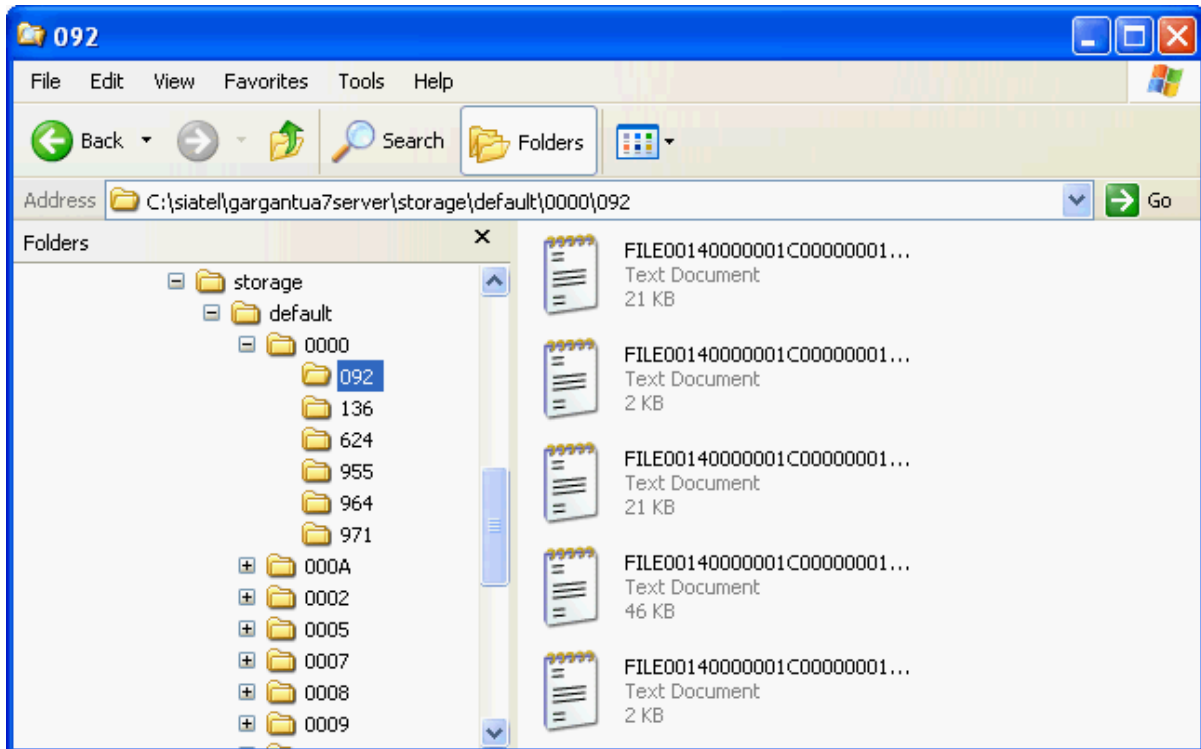
Even if you do not create any storage area or rule, or else if your storage rules do not cover all possible cases, files contained in Gargantua will be saved. Indeed, when installing Gargantua server, it is compulsory to configure a default storage area which allows managing these scenarios (**G Menu > Server configuration > General**).



The `${siatel.home}/storage/default` value is suggested by default for the `siatel.config.default.storage.root` key. The `${siatel.home}` variable corresponds to the path to Gargantua server root folder (by default, `C:\siatel\Gargantua7server`). However, when installing, you may choose any other directory as a default storage area, provided the account system running Gargantua server totally controls (reading, writing, execution) the chosen local or network location.

DEFAULT STORAGE TYPE

Inside the default storage area, Gargantua stores files in a 2-level folder tree structure with alphanumeric ID:



- For each database, Gargantua creates a folder with a 4-digit hexadecimal ID. This single ID is assigned depending on the order in which the database was created and has nothing to do with its name. If a database is deleted, so is the corresponding folder and the other databases folders keep their initial ID.
- Inside each database folder, Gargantua creates subfolders randomly named using numbers between 000 and 999. Folders stored in the database are distributed among these subfolders according to their size and number, so as to optimize access time to documents.



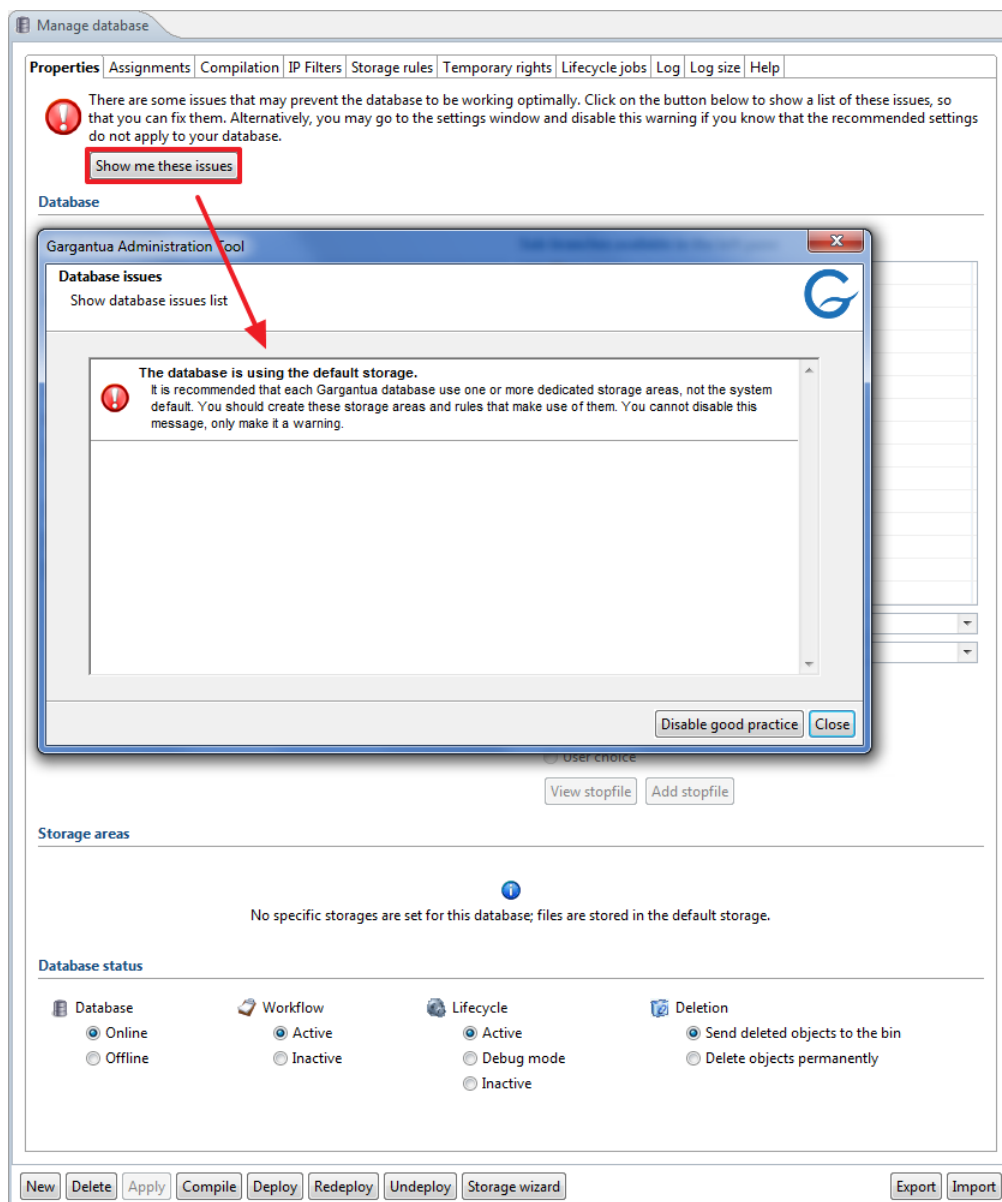
Gargantua creates folders in the storage areas as needed: the folder corresponding to a database is created when a first file is uploaded into it. Likewise, the subfolders are gradually created, so as to ensure an optimal distribution.

WHY CREATE STORAGE AREAS AND RULES?

Even if it is technically possible, it is not a good practice to store all the files uploaded into Gargantua in the default storage area.

Therefore, if the **Enable database good practice messages** option is enabled (Administration Tool navigation bar > **Options** button > **General** tab) and if you create a Gargantua database without specific storage areas and

rules, an error message will display on the database management screen:



Indeed, as you will create several storage areas of different types, you will be able to optimize file storage taking into account:

- Their **size** and their **number** (millions or thousands);
- Their **type** (image or text indexed for full-text search);
- Their **storage life**;
- Their **deadline** and their archiving media (hard drive, CD, DVD, Jukebox).

It is better to do this analytical work beforehand, in order to set up storage areas and rules before starting to fill Gargantua databases. However, Gargantua storage system is designed to adapt to your organization's developments: over time, you may have to modify or create new databases, while others will significantly increase their volume... You can create as many storage areas and rules as you need, at any time.

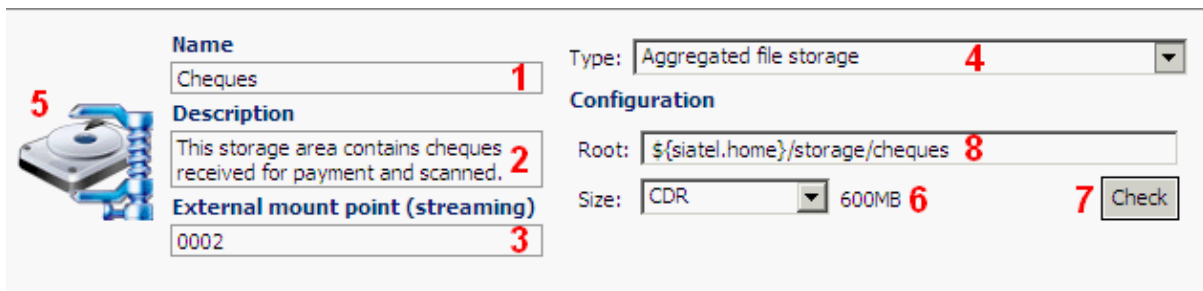
STORAGE AREAS MANAGEMENT SCREEN - AVAILABLE TABS

The management screen of the storage areas contains the following tabs:

- The [Storages list](#) tab lists all the existing storage areas.
- The [Use reports](#) tab allows you to display information about the use of storage areas.
- The [Log](#) tab allows you to view the list of all the operations performed on storage areas, and to filter them according to some criteria.
- The [Help](#) tab allows you to access the contextual help.

“STORAGES LIST” TAB

In the **Storages list** tab of the storage areas management screen, each entry is as follows:



The screenshot shows a form for a storage area entry. The fields are numbered 1 through 8:

- 1: Name (Cheques)
- 2: Description (This storage area contains cheques received for payment and scanned.)
- 3: External mount point (streaming) (0002)
- 4: Type (Aggregated file storage)
- 5: Icon (Hard drive)
- 6: Size (600MB)
- 7: Check button
- 8: Root path (\$(\${siatel.home})/storage/cheques)

1. Name of the storage area;
2. Description of the storage area (function, characteristics, source of stored files...);
3. 4-digit hexadecimal ID, automatically generated when creating a storage area;

This non-editable character string allows to [configure the streaming server](#) if the storage area contains video files.

4. [Type of storage](#) area;
5. Icon corresponding to the type of storage area;
6. Only for some types of storage, [additional settings](#);
7. Button allowing to know if the storage area is being used or if its properties can be modified;

If the storage area is not being used, clicking the button enables you to edit the fields on the right-hand column. The **Name** and **Description** fields always remain editable.



There is no “Check” button for the encrypted storage areas: once the key is generated, they cannot be modified anymore.

8. Path to the storage area root folder;
 - On Windows:

By default, Gargantua suggests the `{siatel.home}/storage/No name` value for this field.

You need to at least replace the **No name** string by a folder name with no accents, spaces, capital letters, or special characters. The storage area will be created inside the storage folder of Gargantua server (by default, `C:\siatel\Gargantua7serveur\storage`), like the default storage area (unless the `siatel.config.default.storage.root` key has been configured otherwise).

You may also choose as a root folder any network or local location that the system user running Gargantua server totally controls. In this case, enter the absolute path to this location in the **Root** field.

You can create manually the root folder of your storage area, then copy and paste the path to this one in the **Root** field. However, you can also simply enter the desired path in the **Root** field and wait for Gargantua to automatically create the necessary tree structure when a first file is saved in the storage area.

- On Linux:

By default, Gargantua suggests the `/var/siatel` value for the **Root** field, which corresponds to Gargantua standard installation directory.

You have nothing to change: Gargantua will automatically create a folder with the name of the storage area in Gargantua installation directory.

*For example, if you have entered the **videos** value in the **Name** field, Gargantua will automatically create the `/var/siatel/videos` root folder for the corresponding storage area.*



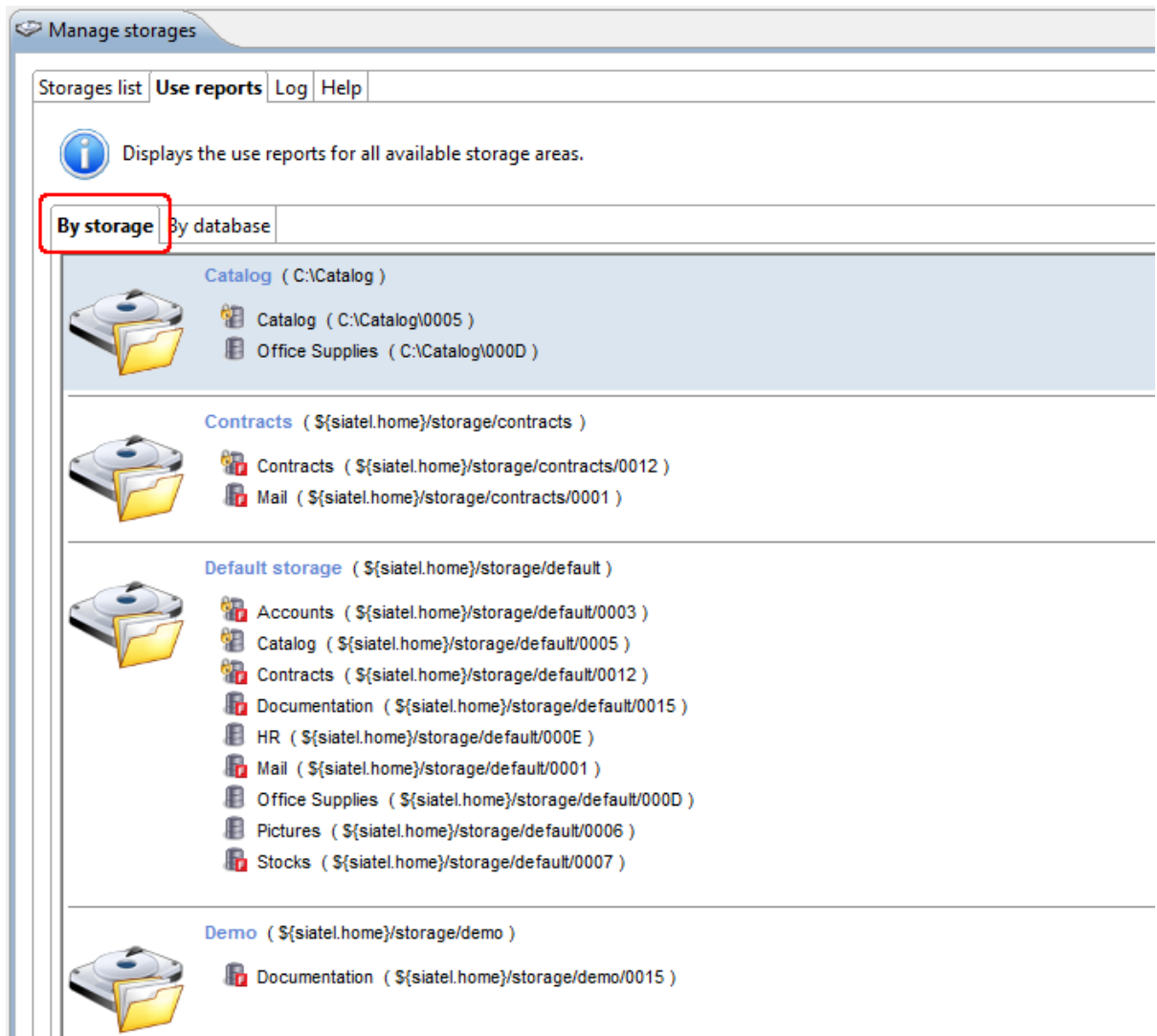
There is no entry in the storages list for the default storage area. You need to browse to its network or local location to access it, as it is not supposed to be modified or deleted after Gargantua installation.

“USE REPORTS” TAB

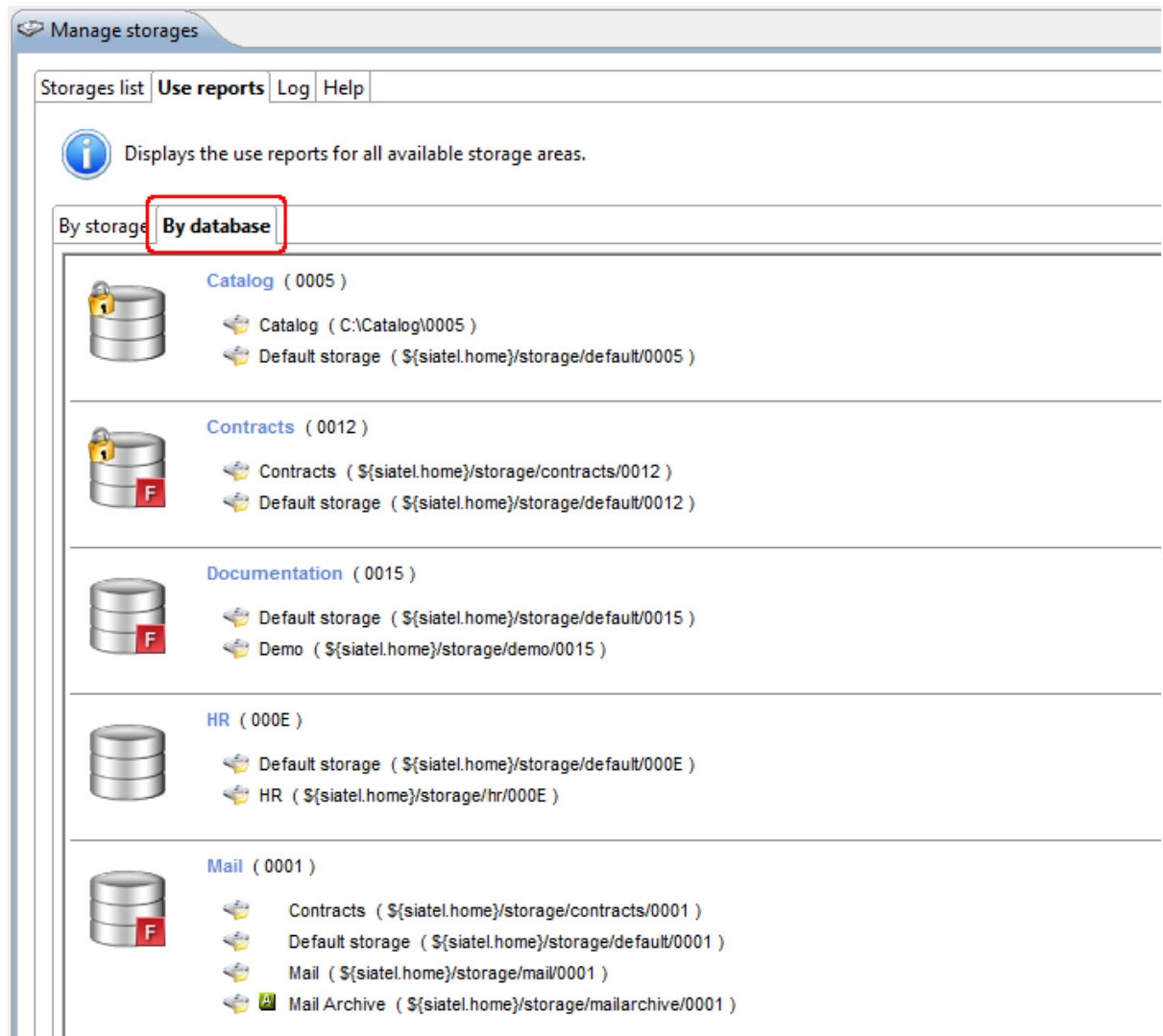
The **Use reports** tab of the storage areas management screen contains detailed information about the use of storage areas.

You can display use reports:

- For each storage area:



- For each Gargantua database:



“LOG” TAB

The **Log** tab allows you to view a list of all the operations performed in one of the branches of Gargantua Administration Tool.

You can filter your search through the following criteria:

- Start date, end date;
- User;
- Operation.

To filter by dates:

1. Fill in the date from which you want to view the operations performed, in the **Start date** field.
2. Fill in the date until which you want to view the operations performed, in the **End date** field.
3. Click on **Display**.

The list of the operations performed between the two dates is displayed in the **Log entries** field.



You can also click on the “Week audits”, “Month audits”, “Year audits” and “All audits” icons, so as to view the operations performed in larger periods of time.

To filter by users:

1. Click on the magnifying glass, close to the **User** field.
2. Fill in the user name from whom you want to view the performed operations.
3. Click on **Display**.

The list of the operations performed by the user is displayed in the Log entries field.

To filter by operation:

1. Click on the arrow of the **Operation** field.
A list of the possible operations is displayed.
2. Click on the type of operation desired.
3. Click on **Display**.

The list of the operations performed in relation with the selected type of operation is displayed in the **Log entries** field.



You can tick the “Show login/logout events” box to display the users connections and disconnections. This functionality is only available for the “Users” and “Server log” branches.

You can tick the “Only Show error audits box” to only display the failed operations.



The “Reset” button allows you to cancel the last filtering.

You can also export the list of the performed operations, in .csv format.

To export a list of the performed operations:

1. Generate a list, depending on the previous criteria.
2. Click on the **CSV Export** button.
3. Choose the place where you want to save the export.
4. Click on **Save**.

You have exported a list of the performed operations.

CHARACTERISTICS OF THE DIFFERENT TYPES OF STORAGE

Gargantua offers the following types of storage:

AGGREGATED FILE STORAGE

AGGREGATED FILE STORAGE (PREDEFINED SIZE)



Aggregated file storage (predefined size) - This type of storage allows you to store efficiently a great number of small files (< 1 MB) by grouping them into archives formatted in a predefined size. In the root folder of the storage area, Gargantua first creates two .storage and .catalog archive files, named with the same 8-digit hexadecimal ID: the former contains the aggregated file data and the latter contains an index. When the first couple of files reaches the size limit, Gargantua creates a new one in order to group together the next files entered into the database, and so on.

The maximum size of each .storage/.catalog group is configured using the **Size** field:

You can either select one of the options from the list (CD-R = 600 MB, DVD-5 = 4 GB, DVD-9 = 7,8 GB) or type manually a value in MB, greater than or equal to 10.

The list of aggregated files in the storage area, as well as their current status, displays in the **Extended information** section of the storage area:

Extended information



List of aggregated files

File name	Storage file size	Catalog file size	Total size	Status	
00000061	945 KB	1.92 MB	2.84 MB	CLOSED	
00000062	945 KB	1.92 MB	2.84 MB	CLOSED	
00000063	945 KB	1.92 MB	2.84 MB	CLOSED	
00000064	945 KB	1.92 MB	2.84 MB	CLOSED	
00000065	945 KB	1.92 MB	2.84 MB	CLOSED	
00000066	945 KB	1.92 MB	2.84 MB	CLOSED	
00000067	45.5 KB	1.92 MB	1.96 MB	OPEN	



The aggregated file storage is adapted for files under 1 MB, rarely modified, that you intend to store in large numbers and/or to export to optical media.

Indeed, copying or moving many small files means opening them one by one, which is very time consuming, even with a highly performant machine. If the files are aggregated, they are treated as a single object, thereby reducing transfer time considerably.

However, when an aggregated file is modified, its new version is actually copied in another group, while the former version remains in its previous location. Therefore, a lot of space may be lost if the aggregated file storage is used for “living” files. Furthermore, it should be noted that the full-text indexing does not work for the aggregated files, which reduces the relevance of searches carried out on the stored documents.



Aggregated filed storage with hashing (predefined size) - This type of storage offers the same functions, as well as a “hashing” feature, that allows to check the files integrity at their extraction from their storage area: a signature/checking system is implemented in the storage and extraction phases. This system allows to ensure that the files content was not modified during their storage.

OPTICAL MEDIA STORAGE

OPTICAL MEDIA STORAGE (CD/DVD/JUKEBOX)



Optical media storage (CD/DVD/Jukebox) - Unlike the others, this type of storage is not used to store the files on the disk but to archive them on external optical media. To create archiving media with the SIATEL Media Tool burning tool, you need to:

1. Create an **Optical media storage** storage area using Gargantua Administration Tool;
2. Type the path to the drive you will use for the burning in the **Root** field; e.g.: **D:**.
3. Start the burning tool and select the **Archiving media** option;
4. After clicking **Next**, select the newly-created storage area in the list box.

From then on, you can select the files to archive. The storage area is used to rename the files transferred to the optical media and to generate for the latter an ID which will allow to find them later on. To access the archived files, you need to use the same drive as for the burning: this drive should remain accessible by Gargantua server.

DISK STORAGE

DISK STORAGE (FIXED NUMBER OF FILES PER FOLDER)



Disk storage (fixed number of files per folder) - This type of storage allows you to limit the number of files stored in each subfolder of the storage area. You configure the maximum number of files per folder by entering a number from 1 to 9999 in the **Maximum size** field **Maximum size** . In the root folder of the storage area, Gargantua creates a first folder named with an 8-digit hexadecimal ID. There, it stores the maximum allowed number of files, then creates and fills in a new folder, and so on.

This type of storage allows to accurately adapt the folder size to the server characteristics and thus optimize performance.



Disk storage with hashing (fixed number of files per folder) - This type of storage offers the same functions, as well as a “hashing” feature, that allows to check the files integrity at their extraction from their storage area: a signature/checking system is implemented in the storage and extraction phases. This system allows to ensure that the files content was not modified during their storage.

DISK STORAGE (AUTOMATIC DISTRIBUTION)



Disk storage (automatic distribution) - This type of storage corresponds to the [default storage type](#): in the root folder of the storage area, Gargantua automatically creates a folder for each database. Then, inside these database folders, it gradually creates from 1 to 1,000 subfolders into which it distributes the files to store in the most efficient way possible.

This type of storage is adapted to large volumes: it allows you to optimize access time to documents. Indeed, on some servers, performance might decrease if you have more than 30,000 files by folder.



Disk storage with hashing (automatic distribution) - This type of storage offers the same functions, as well as a “hashing” feature, that allows to check the files integrity at their extraction from their storage area: a signature/checking system is implemented in the storage and extraction phases. This system allows to ensure that the files content was not modified during their storage.

DISK STORAGE (NO DISTRIBUTION)



Disk storage (single distribution) - This type of storage allows you to store folders by database - like the default storage - but without creating subfolders: in the root folder of the storage area, Gargantua creates a folder for each database. Then, it directly stores all the database files in this folder.

This type of storage is adapted to small volumes.

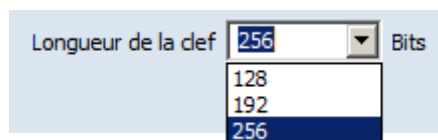
ENCRYPTED DISK STORAGE

ENCRYPTED DISK STORAGE (AES)



Encrypted disk storage (AES) - This type of storage distributes the files in the root folder like the default storage (**automatic distribution**), but it also allows to encrypt all the documents stored in the storage area with the AES algorithm: documents are encrypted and decrypted on the fly using a key accessible by Gargantua server, in a transparent way for the authorized user.

When creating the storage area, select a value for the **Key size** field:



Longueur de la clef	256	Bits
	128	
	192	
	256	

This size can depend on the chosen encryption method. When the storage area is saved for the first time, a unique key, corresponding to the selected settings, is generated. It will be used in the future to encrypt all the documents stored in the storage area, which can no longer be modified. **However:** you can use 192 or 256 bits keys only if Java Cryptography Extension Unlimited Strength is available on your system (see installation guide, “Java Installation” > “Java Cryptography Extension Unlimited Strength”).

This type of storage is useful for confidential documents, as it provides them a very efficient protection against any hacking attempt (medical records, sensitive bank data, scientific or technological innovations...).

Note that full-text indexing does not work for encrypted storage areas, which reduces the relevance of searches carried out on stored documents.

G5 LEGACY STORAGE (READ ONLY)



G5 legacy storage (read only) - This type of storage allows accessing documents of a storage area created with Gargantua 5.

If you have upgraded from Gargantua 5 to Gargantua 7, and you had a big volume of documents in Gargantua 5, you can create a storage area of this type in order to access the documents from Gargantua 7 without having to move them. To do so, specify the Gargantua 5 storage area URL in the **Root** field.

This type of storage only allows accessing existing documents. You cannot add new documents to it. This is why it is impossible to create a storage rule transferring documents to a G5 legacy storage area.

STORAGE RULES MANAGEMENT SCREEN - AVAILABLE TABS

The management screen of the storage rules contains the following tabs:

- The **Rules list** tab lists all the existing storage rules and their properties.
- The **Log** tab allows you to view the list of all the operations performed on storage rules, and to filter them according to some criteria.
- The **Help** tab allows you to access the contextual help.

“RULES LIST” TAB

The **Rules list** tab of the storage rules management screen is as follows:

Manage rules

Rules list | Log | Help

Rules list

Icon	Rule Name	Condition	Priority	Action
Human Resources	file size Greater or equal 0	Priority : 100	Undeploy	✓
Mails				
International database	file size Greater or equal 0	Priority : 100	Undeploy	✓
International database				
Invoices	file size Greater or equal 0	Priority : 100	Undeploy	✓
Accounting2				
Meeting room reservation	file size Greater or equal 0	Priority : 100	Undeploy	✓
Meeting room reservation				
Photo & Video Library	file size Greater or equal 0	Priority : 100	Undeploy	✓
Library				

Rule data

Priority (1-100): 100 Storage: Library Database: Photo & Video Library

Conditions

Criterion	Operator	Value
create date	Equal to	18/01/2016

New Delete Apply Deploy all Refresh

1. List of storage rules, sorted out in descending order of priority; for each rule, you will find:
 - In the first column, the name of the associated database, with an icon representing its main characteristics (private database, full-text...); conditions under which the files to store are

- selected; the name of the associated storage area, with an icon representing its type;
 - In the second column, the priority level of the rule;
 - In the third column, a link allowing to deploy or undeploy the rule with, in that event, an icon indicating whether the working copy is identical (✔) or not (✖) to the deployed version.
2. Data of the storage rule selected in the list; here you can define:
- Priority order of the rule: it determines the rule to apply when a file meets the conditions of several rules at the same time;

Suppose a 1,500 KB schema.tif file is uploaded to a database to which two rules apply; one places .tif files in an “images” storage area while the other places files over 1,000 KB in a “large files” storage area: schema.tif file meets both conditions. Thus, the priority order allows to define which one of both rules applies, in order to know in which storage area the file must be stored.



As the “Priority” field sets the order in which rules are assessed, 1 corresponds to a maximum priority and 100 to a minimum priority. When creating a rule, the default value of the “Priority” field is 100, which means the priority of the new rule is minimum.

- The associated storage area;
 - The associated Gargantua database.
3. Conditions of file filtering for the storage rule selected in the list; see [Conditions of storage rules](#).



The “Storage rules” module of Gargantua Administration Tool allows to access the management screen of all the server storage rules. You can also access a screen listing the storage rules applicable for a given database, using the “Storage rules” tab of the database management screen.

CONDITIONS OF STORAGE RULES

The definition frame of the storage rules conditions is as follows:

Conditions			
Criterion	Operator	Value	
type	Equal to	Medical record	
☒ Confidentiality	Is true		
file type	Equal to	bmp	
file size	Less or equal	10000000	

- Each line of this table corresponds to a condition defined by:
 - A criterion based on: the form of the documents to filter, one of their attributes, their size or the type of files they are associated to;
 - One of the following operators: **Less equal**, **Equal to**, **Not equal to**, **Greater equal**, **Greater than**, **Is null**, **Not null**, **Is True**, **Is False**;
 - A value corresponding to a form name, an attribute value, a file size in bytes, or a three-letter file extension without a dot.



You can add several extensions to the same condition, separated by a comma. For example: "jpg,png,tiff" ; or "doc,docx,txt" ; or even "jpg,png,tiff,doc,docx,txt".



The storage rules based on a form type or an attribute value are listed in the "Summary" tab of the corresponding form management screen.

- The  button allows to add a condition line;
- The  button allows to delete the current condition line;
- The  and  buttons allow to move the current condition in the table.



The operator between the conditions is AND, which means that the files must meet all the conditions so that the rule applies to them.

"LOG" TAB

The **Log** tab allows you to view a list of all the operations performed in one of the branches of Gargantua Administration Tool.

You can filter your search through the following criteria:

- Start date, end date;
- User;
- Operation.

To filter by dates:

- Fill in the date from which you want to view the operations performed, in the **Start date** field.
- Fill in the date until which you want to view the operations performed, in the **End date** field.
- Click on **Display**.

The list of the operations performed between the two dates is displayed in the **Log entries** field.



You can also click on the “Week audits”, “Month audits”, “Year audits” and “All audits” icons, so as to view the operations performed in larger periods of time.

To filter by users:

1. Click on the magnifying glass, close to the **User** field.
2. Fill in the user name from whom you want to view the performed operations.
3. Click on **Display**.

The list of the operations performed by the user is displayed in the Log entries field.

To filter by operation:

1. Click on the arrow of the **Operation** field.
A list of the possible operations is displayed.
2. Click on the type of operation desired.
3. Click on **Display**.

The list of the operations performed in relation with the selected type of operation is displayed in the **Log entries** field.



You can tick the “Show login/logout events” box to display the users connections and disconnections. This functionality is only available for the “Users” and “Server log” branches.

You can tick the “Only Show error audits box” to only display the failed operations.



The “Reset” button allows you to cancel the last filtering.

You can also export the list of the performed operations, in .csv format.

To export a list of the performed operations:

1. Generate a list, depending on the previous criteria.
2. Click on the **CSV Export** button.
3. Choose the place where you want to save the export.
4. Click on **Save**.

You have exported a list of the performed operations.

MANAGING STORAGE AREAS AND RULES

CREATING A NEW STORAGE AREA

In order to create a new storage area, proceed as follows:

1. In the left pane of the Administration Tool, click the **Storage areas** branch.

The storage rules management screen displays in the right pane.

2. In the bottom left corner of the right pane, click the **New** button.

A new entry displays in the storages list.

3. Fill in the fields defining the [properties](#) of the new storage area.
4. When finished, click the **Save** button in the bottom left corner of the right pane.

You have created a new storage area. You can now create the storage rule allowing to use it.

MODIFYING THE PROPERTIES OF A STORAGE AREA

Only the non-encrypted storage areas can be modified after their creation.

Proceed as follows:

1. In the left pane of Gargantua Administration Tool, click the **Storage areas** branch.

The storage rules management screen displays in the right pane.

2. In the right pane, click the entry corresponding to the storage area you want to modify.
3. Click the **Check** button.

A dialog displays:

- If the storage area does not contain any file and is not associated to any saved storage rule, you can modify all its properties.
- If the storage area contains files or associated to one or several saved storage rules, only its name and description can be modified.

4. Click **OK** to close the dialog.
5. Make the modifications (if allowed).
6. In the bottom left corner of the right pane, click the **Save** button.

You have modified the storage area properties.

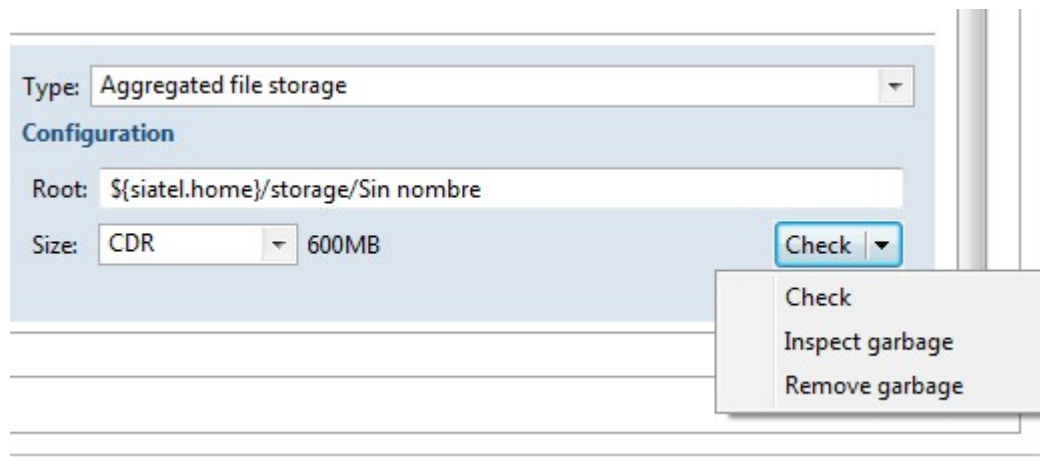
CLEANING UP THE USELESS DATA OF A STORAGE AREA

You can reorganize the data in **Aggregated file storage** areas so as to free space.

To inspect and delete the useless data of an **Aggregated file storage** area:

1. Select a **Aggregated file storage** area.
2. Click on the arrow of the **Check** button.

A drop-down list is displayed.



3. Click on **Inspect garbage**.

A message indicating whether the area contains useless data or not is displayed.

4. Click on **Ok**. If there is no useless data, you are done. Otherwise, finish the procedure.
5. Click again on the arrow of the **Check** button.
6. Click on **Remove garbage**. You have inspected and deleted the useless data of a **Aggregated file storage** area.

DELETING A STORAGE AREA

To delete a storage area, proceed as follows:

1. In the left pane of Gargantua Administration Tool, click the **Storage areas** branch.

The storage rules management screen displays in the right pane.

2. In the right pane, click the entry corresponding to the storage area you want to delete.
3. In the bottom left corner of the right pane, click the **Delete** button.

A confirmation dialog displays.

4. Click **Yes**.

5. If the storage area does not contain any file and is not associated to any saved storage rule, you can delete it: as a result, it disappears from the storages list, and the procedure is complete.

If the storage area contains some files or is associated to one or several saved storage rules, a dialog box informs you that you cannot delete it: click **OK**, and the storage area is maintained.

CREATING A NEW STORAGE RULE

After creating at least one customized storage area, you need to determine the rule(s) allowing you to store the right files inside it.

To create a new storage rule, proceed as follows:

1. In the left pane of Gargantua Administration Tool, click the **Storage rules** branch.

The storage rules management screen displays in the right pane.

2. In the bottom left corner of the right pane, click the **New** button.

A new entry, automatically selected, displays at the bottom of the rules list.

3. Define the [parameters](#) of the new storage rule by filling in the **Rule data** and **Conditions** sections under the rules list.
4. When finished, click the **Save** button in the bottom left corner of the right pane, then click the **Deploy** link in the rules list.



If you click “Save” but not “Deploy”, your rule will be saved but will not apply to any file: you need to click “Deploy” to implement it.

MODIFYING A STORAGE RULE

To modify a storage rule, proceed as follows:

1. In the left pane of Gargantua Administration Tool, click the **Storage rules** branch.

The storage rules management screen displays in the right pane.

2. In the right pane, in the rules list, click the rule you want to modify.

The rule parameters display in the **Rule data** and **Conditions** sections.

3. Modify the storage rule parameters as needed.
4. Click the **Save** button in the bottom left corner of the right pane, then click the **Deploy** link in the rules list.

Modifications have been taken into account: the files are now filtered according to the new parameters of the rule.

DELETING A STORAGE RULE

In order to delete a storage rule, proceed as follows:

1. In the left pane of Gargantua Administration Tool, click the **Storage rules** branch.

The storage rules management screen displays in the right pane.

2. In the right pane, in the rules list, click the rule you want to delete.
3. In the bottom left corner of the right pane, click **Delete**.

A confirmation dialog displays.

4. Click **Yes**.

The storage rule disappears from the list: it has been deleted.

DEPLOYING ALL THE STORAGE RULES

The links in the rules list allow you to deploy and undeploy each rule individually.

However, you can also deploy all the rules of the list in a single operation, by clicking the **Deploy all** button in the bottom left corner of the right pane.

REFRESHING THE STORAGE RULES LIST

You may find it helpful to refresh the storage rules list if:

- You have determined new priorities between the rules and consequently want to sort the list;
- You know other managers of the storage areas and rules are likely to work on these objects at the same time as you and you want to make sure that you are working on the latest version of the rules.

To do so, click the **Refresh** button in the bottom right corner of the storage rules management screen.

STORING ALL THE DOCUMENTS OF A DATABASE IN A STORAGE AREA

In order to be valid, a storage rule must include at least one condition. But you may just want to store all the files of a database in a given storage area.

In this case, you need to create a condition validated by all the files; for example: "File size greater equal 0".

CONFIGURING THE STREAMING FEATURE (VIDEO FILES)

When a storage area is intended to receive files using streaming functions, it must be identified as such to the

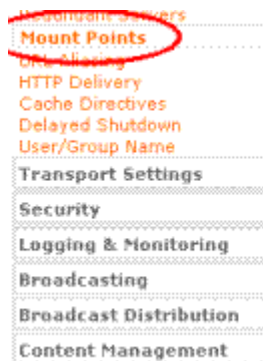
streaming server (HELIX™). Then, the administrator must change settings in Gargantua 7 in order to use this feature.

First of all, you need to install the HELIX™ server and note the following information, which will be helpful to connect to the server:

- IP address of the HELIX™ server, referenced as “HELIXSERVER”;
- Streaming port number (by default, 554), referenced as “STREAMINGPORT”;
- Administration port (random value), referenced as “ADMINPORT”;
- Administrator user name and password, referenced as “ADMINUSER”.

The procedure below explains how to configure Gargantua 7 in order to use the streaming in one (or several) existing or newly-created storage area(s):

1. For every storage area in which you want to store files using the streaming feature, take note of the **External mount point (streaming)** and **Root** fields.
2. Open a web browser and go to the login page of the HELIX™ server by entering an address in the following form (replace the capital letters with the information noted during the server installation):
<http://HELIXSERVER:ADMINPORT/admin/index.html>.
3. Log into the HELIX™ server with the “ADMINUSER” administrator account.
4. In the links on the left, click **Server setup**, then click **Mount Points**.



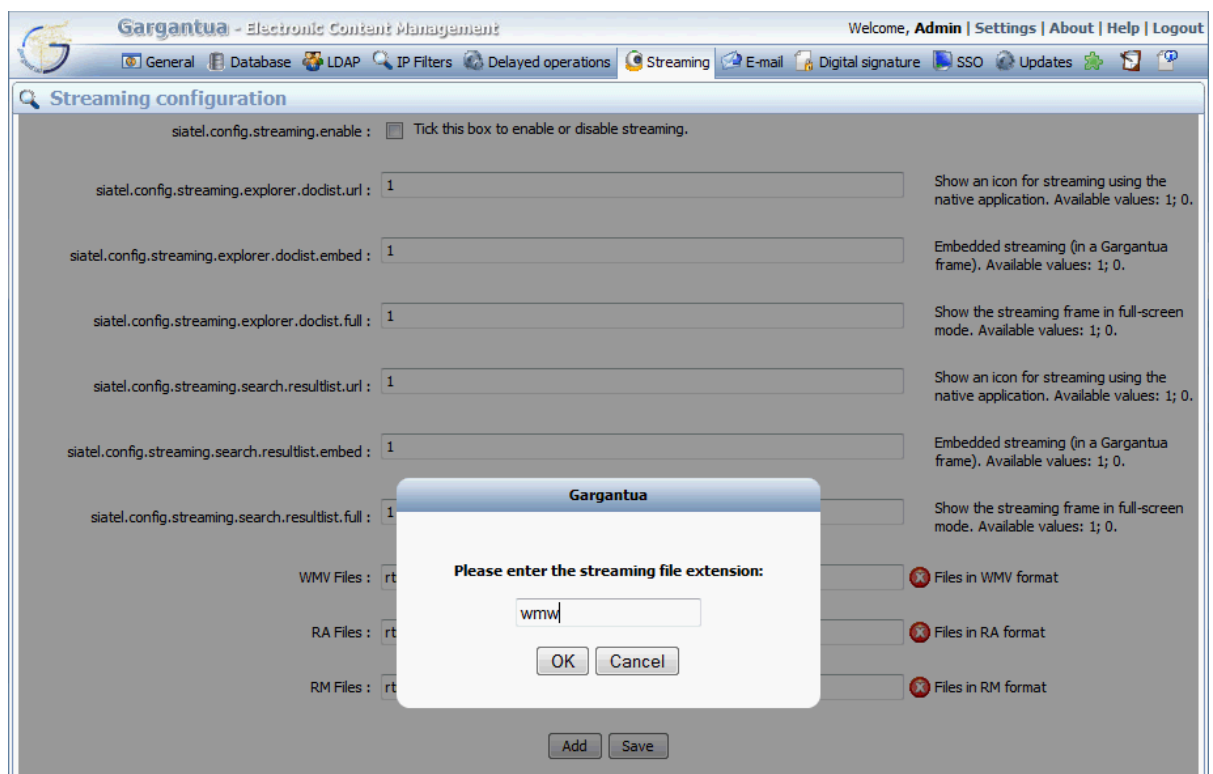
shows each mount point's actual directory in the Base Path.

Every mount point begins and ends with a forward slash, with the exception of the main mount point, which consists simply of a single “/” slash. Links to your main content will use this main “/” mount point. Its default base path is the Content subdirectory under your server installation directory. Modify the base path of the main “/” mount point only if the base path does not reflect the location of your media files.

The image shows the 'Mount Points' configuration page. On the left, there is a table with columns 'Mount Point Description' and 'Edit Description'. The table contains several entries, with '0008' selected. The right side of the page shows the configuration details for the selected mount point '0008'. The details include: 'Mount Point' (0008), 'Mount Point Search Order' (1), 'Base Path' (/0008/), 'Base Path Location' (Local), and 'Cacheable by Caching Subscribers' (Yes). At the bottom, there is a red message: '*A server restart is required to effect changes applied to this page.' and two buttons: 'Apply' and 'Reset'.

5. Create an ID (Mount Point) for every Gargantua storage area using the streaming:
 - The Mount Point name must match the **External mount point (streaming)** of Gargantua storage area (“0008” in the figure above).

- In the **Mount Point** field, type the ID surrounded by two slashes / ("/0008/" in the figure above).
 - In the **Base Path** field, type the **Root** field value of Gargantua storage area.
6. Also create a Mount Point for the default storage area of Gargantua. **ID**: 0000; **Base Path**: path to the default storage area, as defined with the `siatel.config.default.storage.root` key.
 7. Test your configuration: make sure the HELIX™ server has taken into account the access to the video files in Gargantua storage areas.
 8. Log into Web Client Gargantua 7 as the Admin super-user, and access the following URL (G7SERVER = Gargantua 7 server IP address; G7PORT = connection port, by default: 8080): <http://G7SERVER:G7PORT/siatel-web/config/streaming>.
 9. Click the **Add** button and enter the necessary extensions, depending on the file types you are planning to use.



10. In the newly-added fields, enter URLs in the following form: <rtsp://STREAMINGSERVER:STREAMINGPORT>.
11. Save the configuration and restart the server to apply the new settings.
12. Once the server has been restarted, enable the streaming feature in the Web Client (G Menu > **Server configuration** > **Multimedia streaming**) by checking the box corresponding to the `siatel.config.streaming.enable` key.
13. In the Web Client, the files which can be viewed in streaming have a specific icon next to their name. Click the icon to start the streaming.

