



Rational ClearQuest Attachments Package Administrator's Guide and Release Notes Version 2.1



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1. Support for external attachments

ClearQuest built-in support for attachments causes all attached files to be stored in the ClearQuest database. Over time, the constantly increasing number of attachments stored in the database begin to significantly impact both disk space requirements and performance. The ClearQuest Attachments package moves attachments out of the ClearQuest database and on to another medium that is better designed to handle a large number of files.

2. Modifications to the current Attachments tab

When external attachments are enabled, all attachments to a record are moved to the external server defined in the AXPAttachmentControl record (see below) instead of being stored in the ClearQuest database. This modification gives the following benefits:

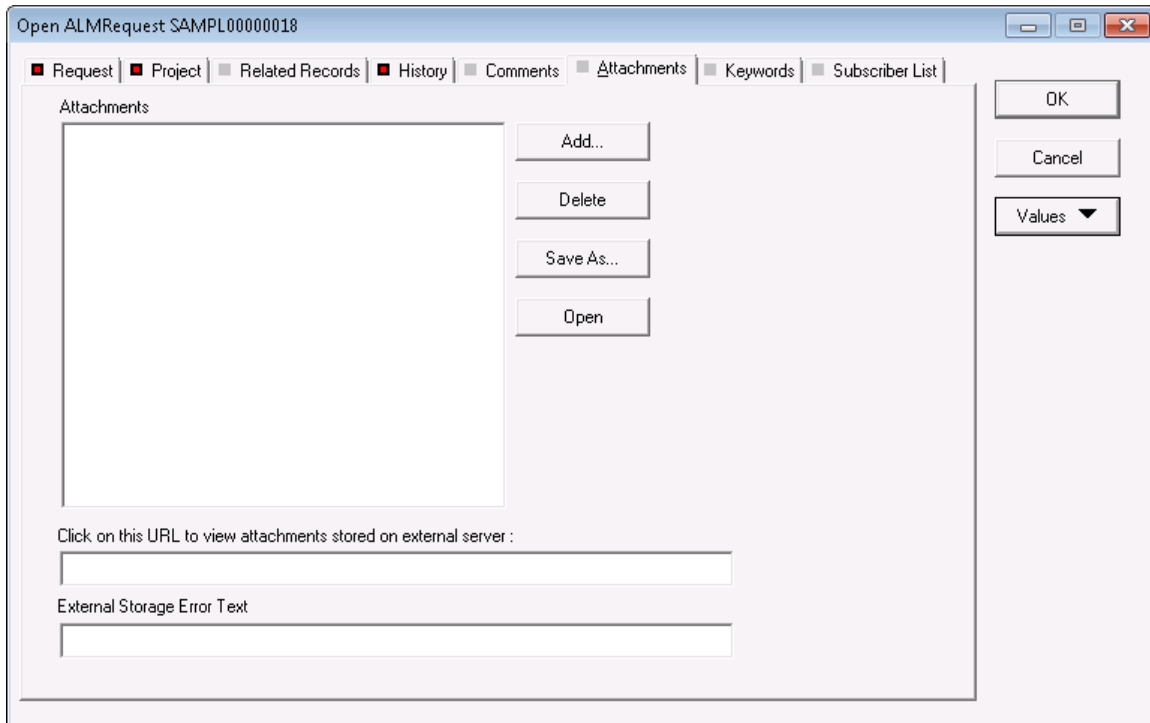
- Ability to store large objects outside the ClearQuest database (by replacing the objects with a reference in the form of an URL).
- Relief from the performance degradation resulting from a large number of objects attached to ClearQuest records.
- Relief from the network overhead of replicating and synchronizing many large objects in a ClearQuest MultiSite® deployment.

To enable the external storage and retrieval of attachments, the Attachments tab now has the following two new fields, both of which are read-only:

- Click on this URL to view attachments stored on external server
- External Storage Error Text

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Field: "Click on this URL to view attachments stored on external server"

This field contains the network URL of the external location of the attachments, which can be accessed through a web browser that opens when the link is clicked.

When external attachments are enabled, all attachments are moved out of ClearQuest and placed on the external storage server: ClearQuest no longer has discrete control over any elements stored on the external server and the attachments must be managed by the tools provided for the external server.

Field: "External Storage Error Text"

This field is used by the external storage server to display an error message if a problem occurs while processing attachments.

3. Other differences when using the ClearQuest Attachments package

Users can no longer see attachments in ClearQuest after the attachments are moved to the external storage server. The only indication that a record has an attachment is a URL in the “Click on this URL to view attachments stored on external server” field.

3.1 *Restrictions in this version*

- You cannot use the ClearQuest client to delete an attachment. To delete files on the external server, you must use external file management tools such as an FTP client.
- The results of attaching a file with the same name as one that has already been moved are undefined. The results depend upon the security configuration of the server.
- Your Attachments FTP server must support only the creation and reading of files and directories and not the renaming or deleting of files and directories.

4. External Attachments record types

4.1 *AXPAttachmentControl*

A new record type has been added to the schema to configure the external attachments facility.

The external attachments package supports File Transfer Protocol (FTP) and different offsite file storage managers. The 4.1 AXPAttachmentControl record type is intended to collect the basic information needed to establish a connection to a remote file server.

To configure the external attachments capability, the administrator submits one of these records containing the necessary information. The record can be modified later if the configuration of the external server configuration changes. Until an AXPAttachmentControl record is submitted and configured, attachments will remain stored in the ClearQuest database.

The following image shows the new form associated with this record type:

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Submit AXPAttachmentControl

AXPAttachmentControl

Name : AXPAttachments

☐ Disable transfer to external storage

Account ID :

Account Authentication :

Control Options :

Server Name :

Storage Location :

Max Attachment File Size :

Reference Location :

Security Context :

Last Updated By : Last Updated On :

Created By : Created On :

OK

Cancel

Values ▼

Note: The current implementation allows only one AXPAttachmentControl record for one ClearQuest database.

4.1.1 Field Details of the AXPAttachmentControl record type:

Name:

The name of the AXPAttachmentControl record which, by default, is *AXPAttachments*. This field is read-only.

Account ID:

The account (user ID, and so on) to be used for authenticating with the external attachment server.

Account Authentication:

Any authentication information needed (such as a password) to access the Account ID.

Control Options:

Any control information needed to establish a connection to the remote server.

Server Name:

The name of the remote attachments server. The form of the name varies,

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depending upon the type of server. For FTP, it is the fully qualified name of the server.

Storage Location:

The location on the server that the specified account ID will use for storing attachments.

Max. Attachment File Size:

The maximum size of an attachment (in bytes) that can be stored in the ClearQuest database. This field is provided to protect the ClearQuest database when the external server is unable to accept connections. If the external server is unavailable, the attachments are stored locally within ClearQuest. This field provides a means to limit the size of locally stored attachments to a manageable size. A size of 0 (zero) indicates that no attachments will be stored locally. A size of -1 (negative one) indicates that there is no limit to the size of attachments stored locally. Attachments stored within the ClearQuest database using this mechanism are not automatically moved to external storage. When connection to the server is re-established, the record must be manually updated to cause the file to be moved to the external server.

See also: "Disable transfer to external storage"

Security Context:

This option can be used to enable security context on this record. See section 4.1.2, "Modifying the AXPAttachmentsControl record type," for details about how to secure this record type.

Reference Location:

The location on the server that unauthorized (anonymous) accounts can use for locating external attachments. This field is associated with the "Storage Location" field but can be different, depending on how the external storage manages access to its data.

Disable transfer to external storage:

This option can be used to temporarily disable the external attachments facility. When this option is selected, no attempt is made to connect to the external server and any value in the "Max. Attachment File Size" field is ignored.

Last Updated By:

Displays the ID of the last ClearQuest user who updated the record. This field is read-only.

Last Updated On:

Displays the date of the last update. This field is read-only.

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Create By: <Not "Created By"?>

Displays the ID of the ClearQuest user who created the record. This field is read-only.

Created On:

Displays the date the record was created. This field is read-only.

Control Options

The Control Options field provides the ability to manage external attachment configuration settings for specific external server implementations. The Control Options field is a free-format text string containing **KEY=VALUE** pairs separated by semicolons [;]. The following list describes the general options available for this configuration:

TYPE: The external server type. Currently only **FTP** and **NONE** are supported. **FTP** is the default.
Setting **TYPE** to **NONE** disables external attachment processing in much the same way as **DISABLED** and **Disable transfer to external storage** do.

DISABLED: Can be **TRUE** or **FALSE**. Equivalent to **TYPE=NONE**. The default is **DISABLED=FALSE**.

When **TYPE** is **FTP** the following additional options can be provided:

PORT: The communications Internet Protocol (IP) port number that should be used for connecting to the remote FTP server. The default is port number 21.

BLOCKSIZE: The block size that will be used during file transfers. The default is 4 kilobytes.

Examples:

TYPE=FTP

This is the simplest configuration. Target server type is FTP, all other options are set to the default values.

TYPE=FTP;PORT=5021;BLOCKSIZE=1024

Target server type is FTP, the port used by FTP on the target server is 5021, and transfer block-size is 1024 bytes (1 kilobyte).

TYPE=NONE;PORT=21

Offsite storage is disabled. This is equivalent to selecting the "**Disable transfer to external storage**" option.

4.1.2 Modifying the AXPAttachmentsControl record type

To restrict access to the AXPAttachmentsControl record type, take the following steps. (Note that these steps assume that you are familiar with ClearQuest Designer, with the process of editing a ClearQuest package, and with ClearQuest's Security Context. If you not familiar with these topics, refer to the ClearQuest documentation for more information.)

- 1) Enable package editing by running the follow command:

```
packageutil enablepackageediting -dbset <dbset-name> <admin-id> <password>  
-enable <user-id>
```
- 2) Bring up Clearquest Designer and find the AXPAttachmentsControl record, which is under stateless record types. On this record type, modify the SecurityContext field as follows:
 - a. Change the referenced record type to specify the record type you want to use as the security context. Consider using an existing record type, such as ALMSecurityPolicy which is from the ALM package. If you are not using the ALM package, use a record type you already have, otherwise you will need to create a new record type.
 - b. Select the "Security Context" check box to enable security.
- 3) Change the behavior for the SecurityContext field to be mandatory.
- 4) Validate and test the schema before you deploy it into a production environment.
- 5) Disable package editing by running the following command:

```
packageutil enablepackageediting -dbset <dbset-name> <admin-id> <password>  
-disable <user-id>
```

5. Upgrading from Attachments 1.0

Upgrading from Attachments 1.0 to Attachments 2.1 does not require any pre-upgrade or post-upgrade steps. The new functionality for storing attachments on an FTP server does not get enabled till the feature is configured with the AXPAttachmentsControl record. Until that configuration is done, the attachment functionality remains the same as it was with Version 1.0.

6. Known issues and limitations

1. When the FTP server is not running, there is 50-character limitation on the length of attached file name and description for the file. As a result, the file name or the description may be truncated.

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