AttachmentExtractor
for MS CRM 2013

Version 2013.7 – November 2014

User Guide
(How to work with AttachmentExtractor for MS CRM 2013)

Table of Contents

1   User Guide

This guide gives detailed explanations of all functionalities provided by **AttachmentExtractor for MS CRM 2013.**

If you need to reach us, see the [contact page](#).

2   Introduction

AttachmentExtractor offers you a service based tool to move attachments from within your CRM 2013 to either a *Sharepoint location or a fileshare*, saving precious database space on the CRM 2013 and enabling various indexing & search options via Sharepoint and Microsofts Search Server functionality.

AttachmentExtractor is able to connect to any Microsoft Dynamics CRM 2013 (onPremise, online and hosted) and offers extracting email and note attachments, as well as extracting the email and note item itself for indexing its contents (both email and note descriptions are NOT changed, just replicated to an indexable file).

3   Trial Mode Restrictions

In trial mode the service will stop after each processed batch of items. The processing batch size is limited to 25 items per cycle and a maximum of 500 Items is supported in total.

4 Detailed functionality

AttachmentExtractor will install a separate Service for each configured Organization.

"url-extension": AttachmentExtractor requires the „url"-extension to be allowed in CRM. During setup, AttachmentExtractor modifies the blocked extensions List in CRM to allow „url".
(This setting can be found in the system settings of your CRM Organization)

Each service will be listed in the Windows Service overview separately (see section 9, Additional information for a sample screenshot).

The Services **cannot** be started directly from the ServiceManagement. The product also installs a heartbeat service, which is monitoring the index services and restarting them if required. (E.g. on a server reboot). This service starts automatically on boot of the server and can be controlled via windows ServiceManagement.
Alternatively the services can be launched via the ServiceManagement Application, which is installed with the product.

AttachmentExtractor creates a new application log named www.mscrm-addons.com where status information, errors and batch process summaries are logged. This is independent of the extended logging features available in the service configuration panel.

Batches are processed every 100 seconds, the heartbeat service checks for service restarts every 500 seconds.
These times can be configured via registry, HKEY_LOCAL_MACHINE\SOFTWARE\PTM EDV-Systeme\AttachmentExtractorserver.

Create a DWORD value called HeartBeatInterval to change the heartbeat services default, a similar value called ServiceInterval is available for the extraction services.

With every batch processed, AttachmentExtractor analyses the emails and/or notes, saves the attachment to the configured location (FileShare or SharePoint) and then replaces the existing attachment with a url-file pointing to the new location. The new attachment is usually less than 500 bytes in size.

In addition the email or annotation item can be saved itself to allow indexing and searching in the actual entities description fields. If you choose to index those entities, the file saved to the external location will also contain some meta information, as for example with an email the subject, from, to, cc and bcc are also saved into the content file.

If you are using a SharePoint save location, additional attributes will be created with the documents

- CrmBackLink
  Containing a link to the actual CRM item
- EntityGuid
  The unique ID of the item
- EntityTypeName
  The name of the Entity in CRM
- IsCrmRecord
  Indicating if this item is an actual CRM record, or an attachment
- LinkGuid
  Containing the GUID and TypeName as a csv list for the attributes specified below
- LinkData
  Containing the display values for the attributes specified below
- EntityDate
  The created on date of the item in CRM

A comma separated list of the following items is saved into the SharePoint Attributes. The Attributes are separated by a semicolon:

For Email:

"from", "to", "cc", "bcc", "subject", "regardingobjectid"

For Annotation (Note):

"subject", "filename", "filesize", "notetext", "objectid"

Please note that the attributes are set for both the attachments and the actual entity.

The AttachmentExtractor creates a weekly or daily subfolder, based on the created date of an item.

weekly subfolder

📁 2014 week42 (13-07-2014 to 19-07-2014)	13.10.2014 09:13

daily subfolder

📁 2014 week42 (13-07-2014 to 19-07-2014)_13Mo	13.10.2014 09:13

5 Overview - ServiceManagement
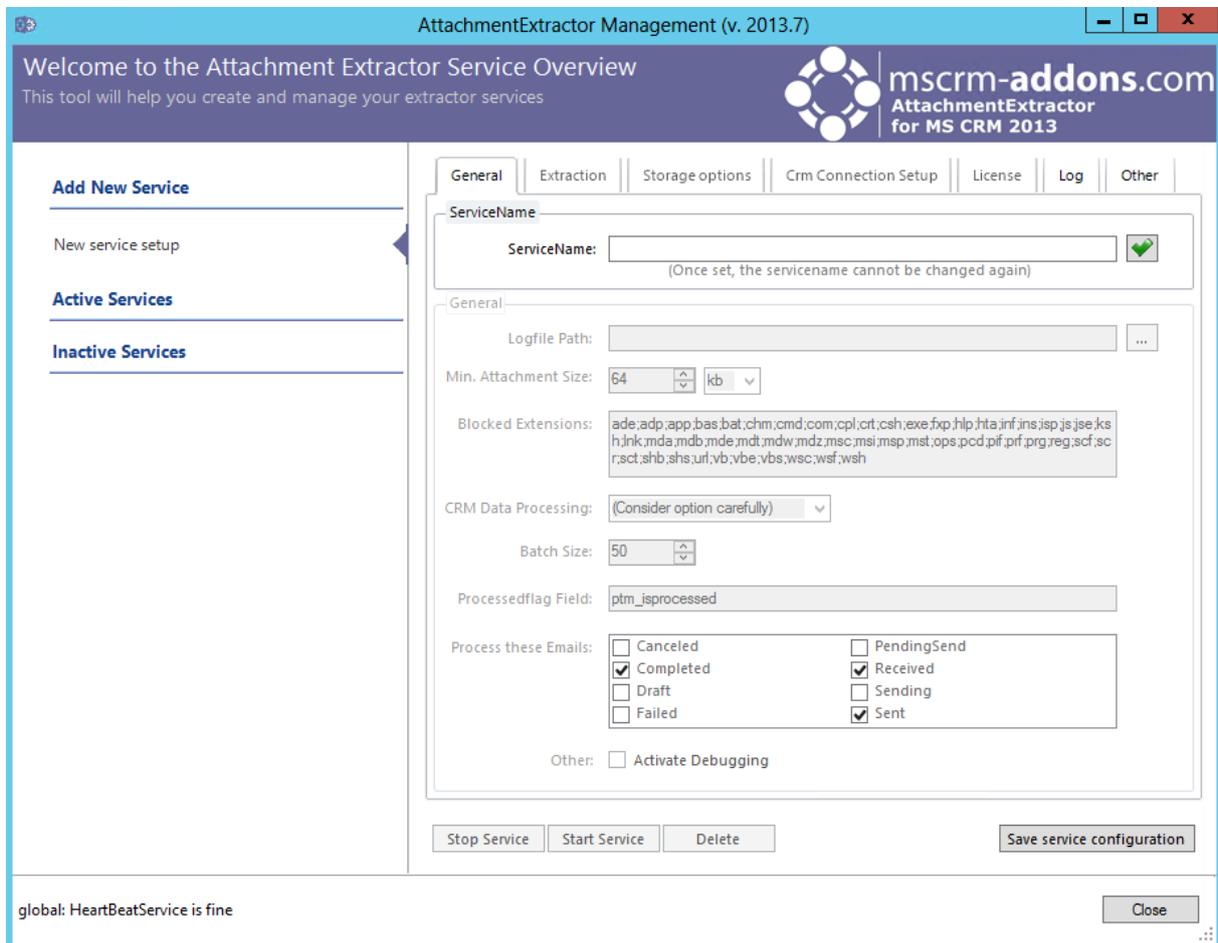
Add New Service:

- <u>New service setup</u>: Start here to create a new Service

When creating a new service, you need to give it a descriptive service name, that name cannot be changed once set.

Active Services: A list of all running services

Inactive Services: A list of all inactive services

6   Configuration of a Service

- Logfile Path: The path where the extended logging for this service is saved

- Min. Attachment Size: The minimum file size for an attachment to be extracted

- Blocked Extensions: defines the files, that will be rejected due to their extension

- CRM Data Processing: Select to MOVE or COPY your CRM data. Attention! A move of data cannot be undone.

- Batch Size: Number of items to be processed per step

- Format:

- Strip HTML Tags: Tries to remove the HTML tags from an email body

- Encoding: Option to change encoding. ATTENTION! The encoding must be supported by your search method, if you want to search inside the files extracted.

- Process these Emails: Select the states an email can have to be processed

- Other:

- Activate debugging : Enable extended logging

7   Extraction

Email & Notes : Items to Index

- Selecting Email or Note: will extract the Email/Note body and save it as a File.

- Selecting EmailAttachment or NoteAttachment: does process the attachment ONLY!

- Update Items: updates existing Email/Note files.

- Delay Email/note processing by [0] hours: Set the Email/Note delay processing by hours. Supplying a value tells the AttachmentExtractor to ignore all emails, whose modify or created date isn't at least older than the specified delay. (Setting the value to e.g. 168 means, that AE will not process any emails, that have been created/modified within a week)

- Apply delay to date: Specify if the delay should be applied to the created or modified date.

Other

- Encoding specifies the encoding of the text files. Make sure it´s compatible with any further processing like Microsoft Search Server. This setting should not be changed, unless you are sure, your SharePoint needs a different encoding!

- Stop on Error: The service will also shut down on non-critical errors.

- Excluded Entities: Contains a list of entities, which notes will not be processed by the Extraction. This is necessary to prevent the extraction of resource data required by Workflows or other Add-Ins. As an extraction cannot be reverted, please make sure you have identified all system required resources that use annotations for storing data before starting the service.

- New Folder per: Define if the data should be saved in a daily or weekly folder. If you have more than 5.000 items per week it is necessary to choose the daily folder.

8 Storage Options
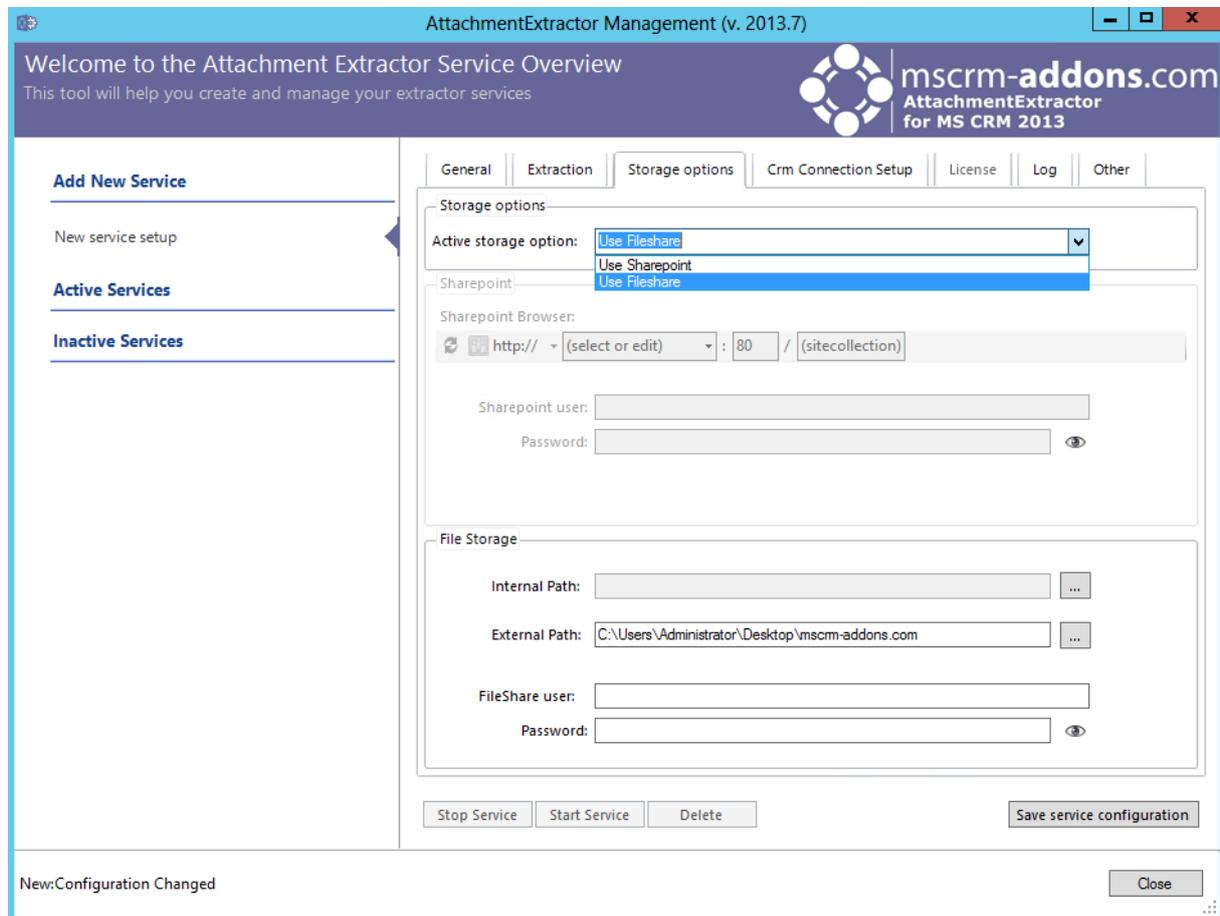
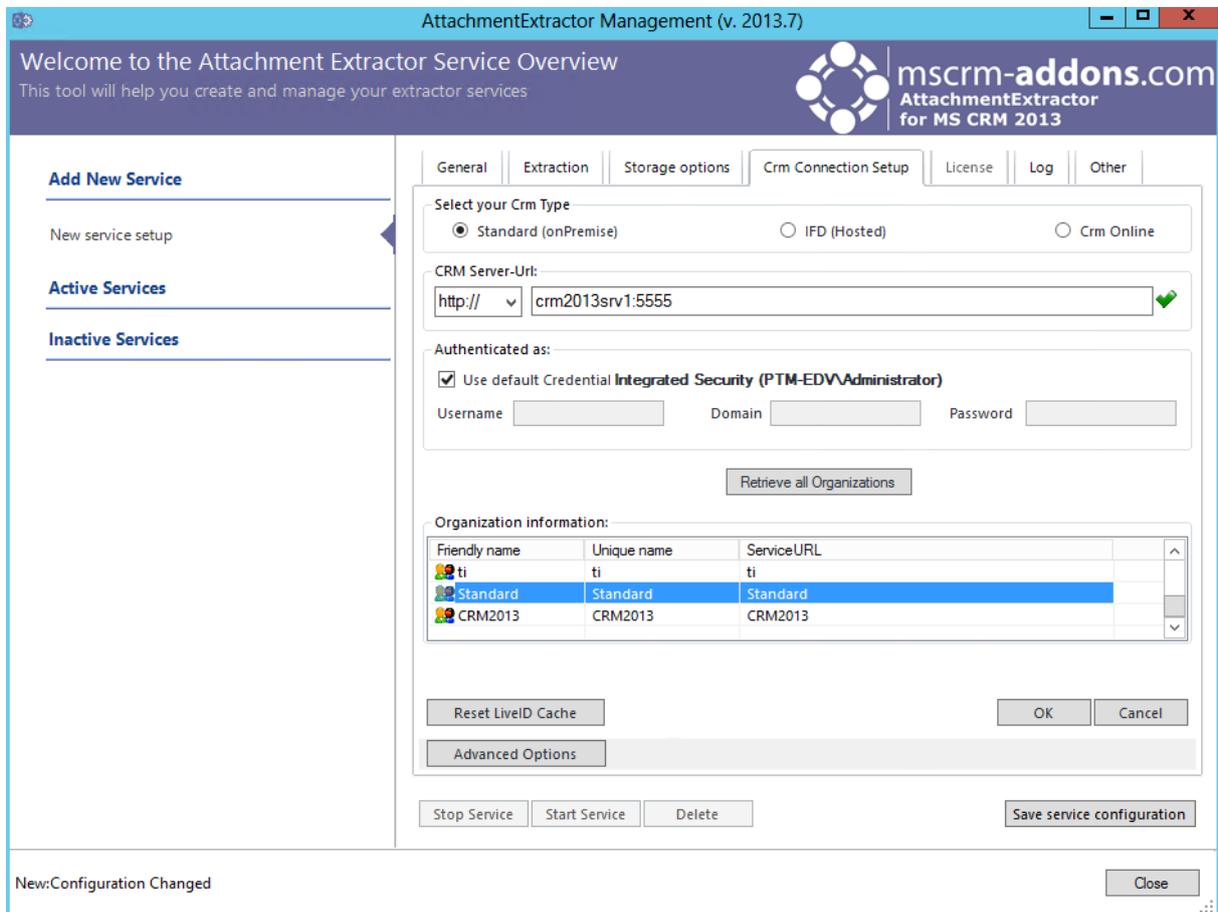**Active Storage:** Select, if you want to use SharePoint or a FileShare

SharePoint

- SharePoint Navigation: Enter your SharePoint server and port or select from the dropdown list. Browse through your sites and libraries to specify the storage location. You MUST select a library. The (sitecollection) entry is optional and can be omitted, if not required.
- SharePoint user: The Username of the SharePoint user
- Password: The Password of the SharePoint user (Click on the Eye to see your Password unencrypted)

File Storage

- Internal Path: Choose the local Path of the Storage (e.g.: C:\AE\Files)
- External Path: Choose the external Path of the Storage, as it would be accessed by the users (\\fileserver\AE\Files)
- FileShare user: The username of the FileShare user
- Password: The Password of the FileShare user (Click on the Eye to see your Password unencrypted)

9   CRM-Connection Setup

- <u>CRM Server-Url</u>: Url of the CRM-Server you want to use

- <u>Authenticated as</u>: Decide if you want to use default Credentials (not recommended, as the service is run as Networkservice and that user usually doesn't have CRM access) or if you want to log on with other credentials (always use administrator).

- <u>Retrieve all Organizations</u>: Get all Organizations from the selected CRM-Server

- <u>Organization information</u>: Friendly name, unique name and ServiceURL of each Organization

10 License

	LicenseValue	Systemvalue	Status
General license information			
Licensemodel	perSite		ℹ
Licensekey	crsIXc3MfJrcstgSVJCKFXACR...	Licensekey installed	ℹ
BusinessUnit	Standard	Standard	✔
Number of site licenses	110	6	✔
Licenses for Readonly Users	0	0	✔
Expiration	28.10.2015 00:00:00	730 days left	✔
Support	28.10.2015 00:00:00	730 days left	✔
Issued product	AttachmentExtractor	AttachmentExtractor	✔
Version upgrade covered ...	28.10.2015 00:00:00	01.01.0001 00:00:00	✔
License Status			
LicenseState		valid	✔

This overview is enabling you to quickly check your license state. If the license is invalid, the service will not start.

While in Trial mode, the service will terminate after each batch and only work through a maximum of 500 items total. After reaching that margin, it will stop completely.
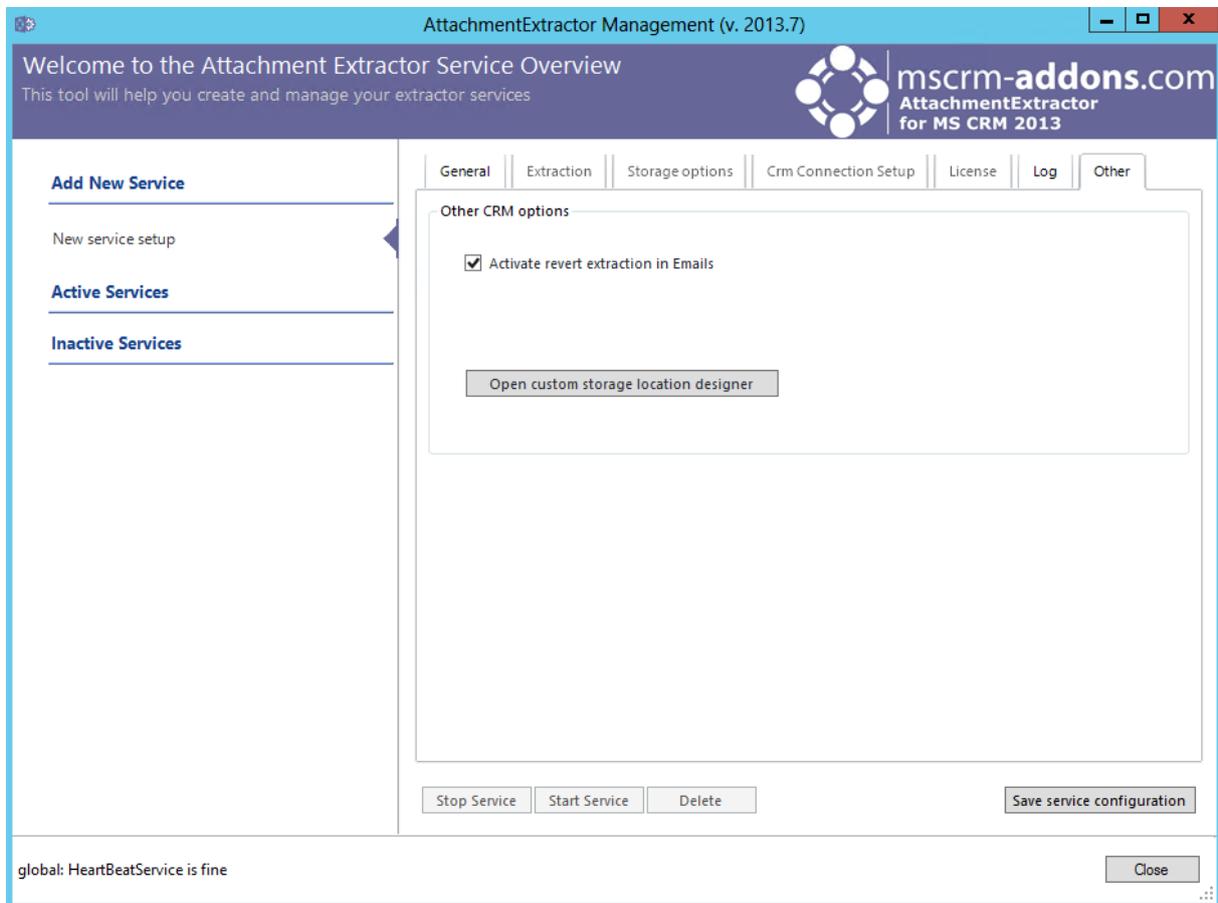
11   Log

The log provides an excerpt of the AttachmentExtractors eventlog, filtered for this specific service. This helps you to identify any issues with the service.

Double clicking on an entry in the list brings up the full description in a message box.

12   Other

Activate revert extraction in emails: Activating this option gives you the possibility to revert Email extractions. If you want to pass on, answer, or work with extracted Emails you should activate this option.

Open custom storage location designer: Clicking this button will lead you to the AttachmentExtractor custom storage location designer.

13   AttachmentExtractor custom storage location designer

This is a preview tool for designing and testing custom storage locations based on CRM entity data.
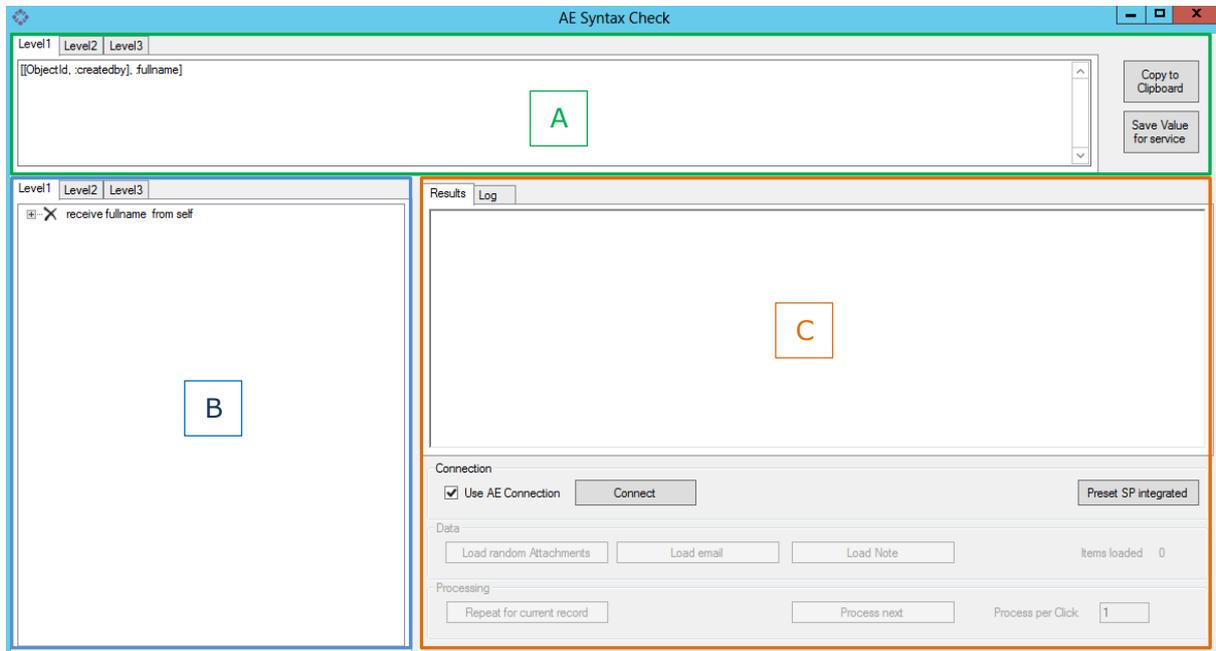
Attention: please note, that this tool requires profound knowledge of the CRM metadata!

Section A

The different levels of AttachmentExtractor Syntax Check show example Syntaxes (for detailed information on how to define Syntax for the folder creation, please read chapter 14)

Level1
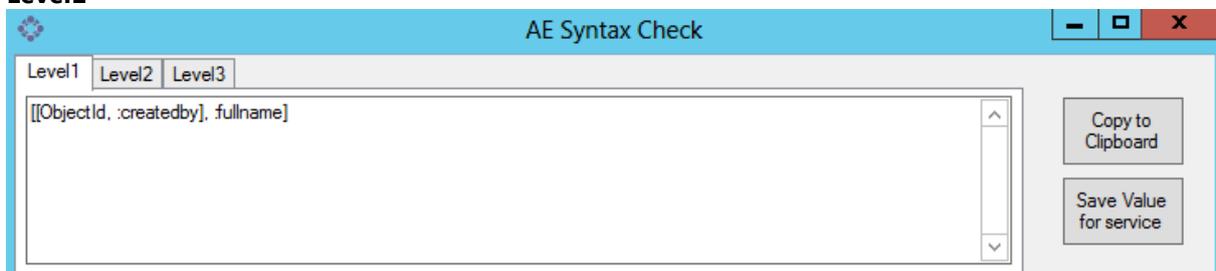
Example: always starting from the attachment, this example gets the createdby user of the entity referenced by objectID (this is the email in case of an email attachment and the parent entity in case of an annotation) and returns the fullname of that system user.

Level2
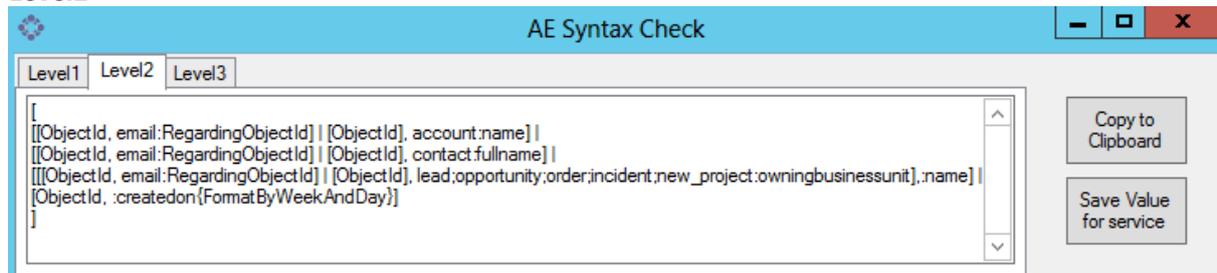
Example: RegardingEntityPattern.

Building the reference to the parent object, this is a reusable pattern to either retrieve the emails regarding object or the annotations parent entity, whatever the attachment reviewed is attached to.
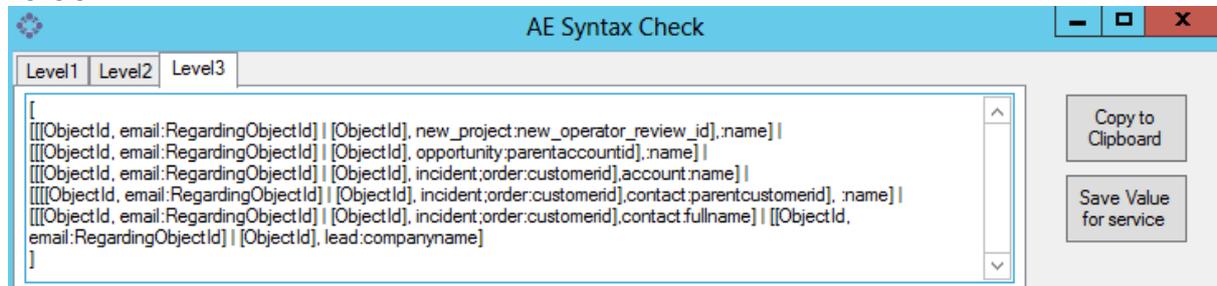
[ObjectId, email:RegardingObjectId]   <= check if the parent object is an email, if so, return the emails regarding object
| <= logical or, will only be evaluated, if above statement doesn't return data
 [ObjectId]   <= In case of an annotation, retrieve the parent entity.

Summary: this sample pattern returns an entity reference pointing to either the emails regardingObject, or if the attachment is an annotation, to the parent entity of the annotation.

Level3

Example: in the screenshot above you can see another example of cascaded reference resolves.

[
 [
   [ObjectId, email:RegardingObjectId] | [ObjectId], <= RegardingEntityPattern

If the regardingentitypattern returns an entity of type incident or order, retrieve the customerid, which is another reference, pointing to an account.
incident;order:customerid],contact:parentcustomerid],

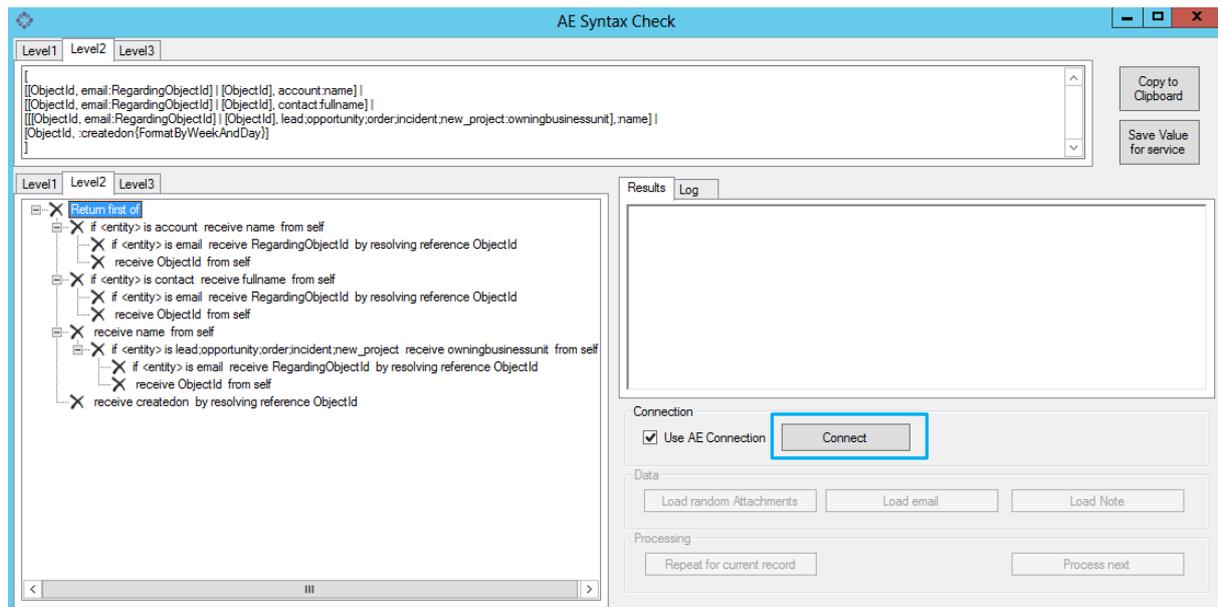this receives the name of the referenced Account, if it exists
:name] |

In General:

- Copy to Clipboard: Click here to copy your Syntax code to Clipboard

- Save Value for service: Click here to save your Syntax Value for Service

Section B

Shows a detailed tree-view of the chosen Level. E.g.: Level2. (See next screenshot)


Choose the appropriate Level, activate the "Use AE Connection" check-box + [Connect] to connect to the current system or deactivate the checkbox and click on [Connect] to choose a different CRM connection.

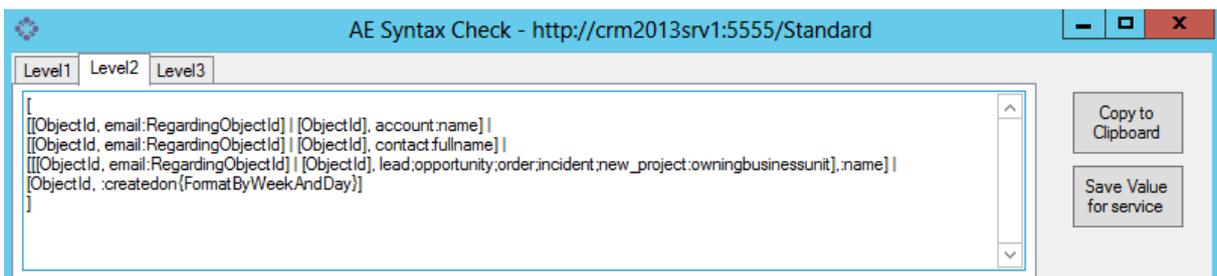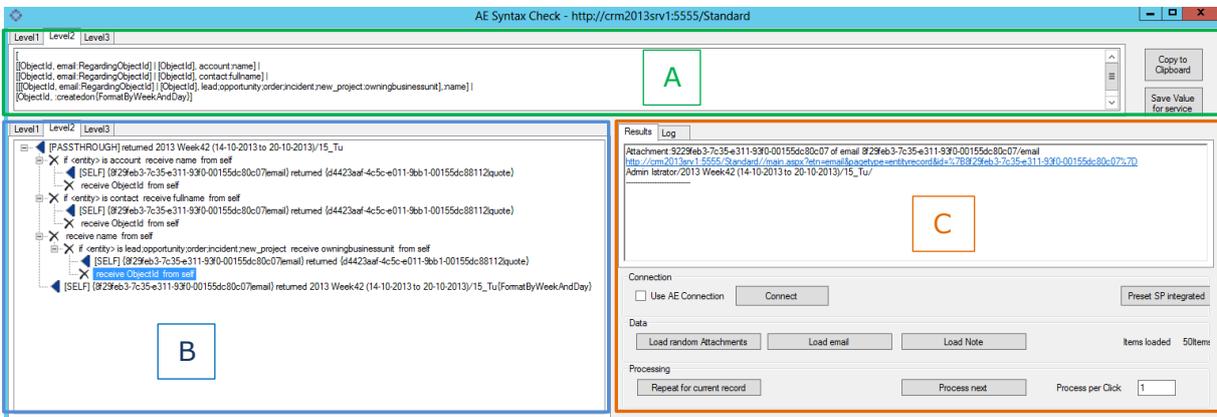This will activate the three Data Buttons shown in the next screenshot:
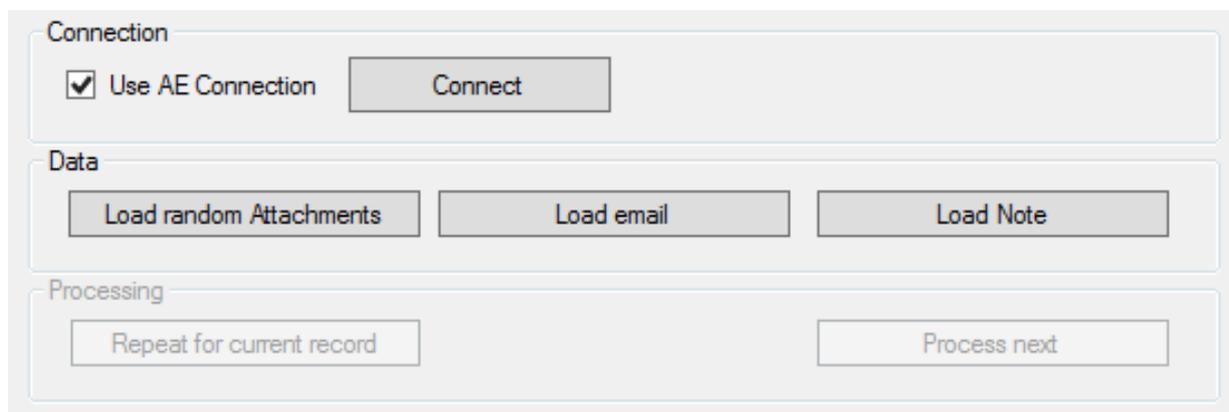
[Load random Attachments] Click here to load 50 random Attachments.

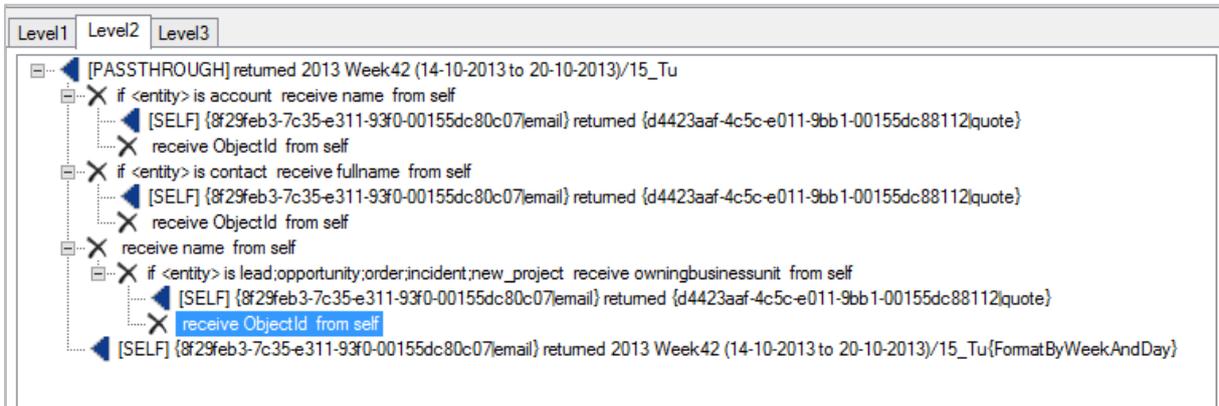[Load email] Click on this button to insert a CRM link to an email.
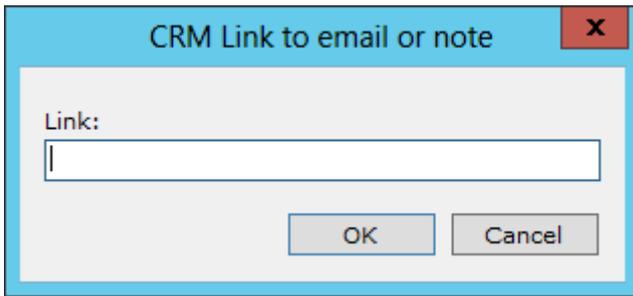
Please note: Use the CRM send as link functionality to receive the proper link. Click on [OK] to continue.

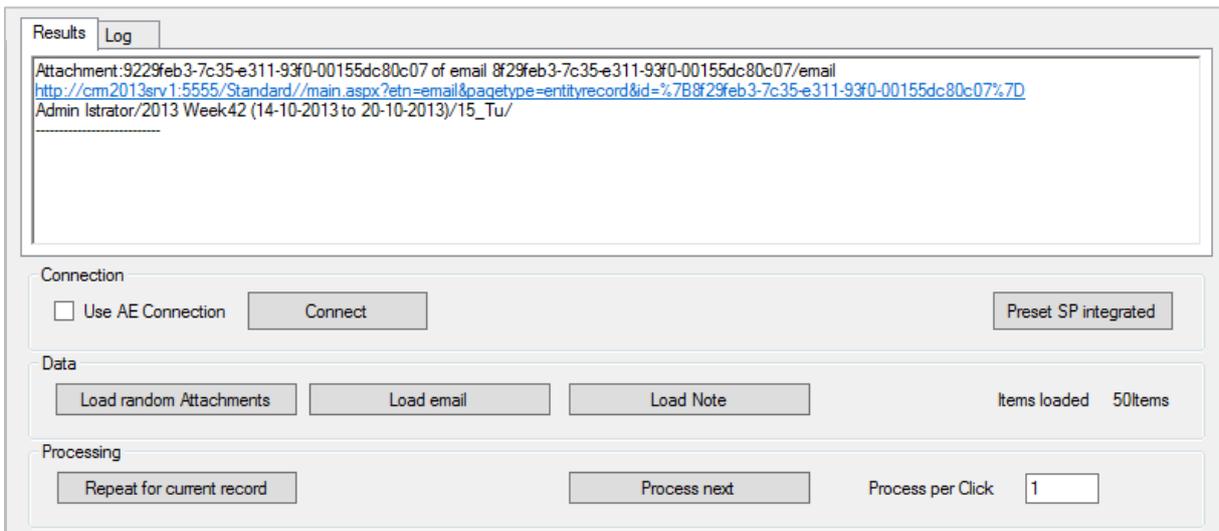[Load Note] Click on this button to insert a CRM link to an email or note.

B

After running a test, the result browser shows the actual return values and pathes resolved for the result.

C

In the Result-window shown in the screenshot above you can see:

First line: The attachment
Second line: CRM-link to the attachment
Third line: The result of the first and second line

Section c: repeat for the current record.

Result:

14   AttachmentExtractor Folder Creation Syntax

The new AttachmentExtractor folder creation syntax allows navigating through relations in CRM and picking fields from any related entity, starting from the Attachment Entity itself.

Definition of the new syntax:

Blue: optional;
Green: mandatory

[EntityReference], [EntityFilter separated by ;]:fieldname

Basic example, get one field from the entity itself

,:filename

This tells the parser to stay in the entity itself (EntityReference is omitted). EntityFilter must be empty for fields inside the own entity. The parser will try to locate a property called filename and return the value of this property as a foldername.

Example of getting an item from the owning entity of the attachment

ObjectId: createdon

The parser will locate the EntityReference ObjectID, load the Entity, that the reference is pointing at and return the property "createdon" from it.

Return: 29.07.2011 06_04_10

ObjectId: createdon{FormatByWeekAndDay}

The addition {FormatByWeekAndDay} tells the parser to convert the date into a more readable version

Returns: 2011 Week30 (25-7-2011 to 31-7-2011)/29_Fr

Working with entity filters

ObjectId, email:RegardingObjectId

By supplying entity schema names you can tell the parser to only return a field, if the entityreference is of a specific entity type.

In the above case, the RegardingObjectId is only returned, if the ObjectID reference is pointing to an email. In Case of an annotation, this expression would return no value.

Working with encapsulated References

By encapsulating a term, you can resolve a reference and work with the result item.

[ObjectId, annotation:ObjectId], :name

This will read the Entity the annotation is attached to and return the name property. If the attachment is owned by an email, the expression would not return a value

Working with optionals

NOTE! Expressions containing optionals must be grouped by surrounding []

You can combine expression by a | (Pipe) sign. This tells the Parser to evaluate all expression until a result is found.

[[ObjectId, email:RegardingObjectId] | [ObjectId, annotation:ObjectId],: createdon]

This Expression will analyze the ObjectID reference and return the RegardingObjectId, if the entity is an email. If the entity in ObjectID is an annotation, it will return the ObjectId Reference of the annotation object.

The resulting expression is Entity Reference and the Parser will try to locate the created on field in the resulting entity

With entity filter:

[[ObjectId, email:RegardingObjectId] | [ObjectId, annotation:ObjectId], account:name]

Same expression, but the return value will only be evaluated if the referenced entity is of type account (Annotation is attached to account or email is having a Regarding Object of type account), returning the account name

The big picture

[
[[ObjectId, email:RegardingObjectId] | [ObjectId, annotation:ObjectId], account:name] |
[[ObjectId, email:RegardingObjectId] | [ObjectId, annotation:ObjectId], contact:fullname] |
[[ObjectId, email:RegardingObjectId] | [ObjectId, annotation:ObjectId],
:createdon{FormatByWeekAndDay}]
]

Above expression has 3 optionals:

1. Identify the Regarding entity of the attachment and return the regarding object.
   (Via regardingObjectID in case of an email and the ObjectID in case of an annotation)
   If the regarding entity is of type account, return the property name.

2. Identify the Regarding entity of the attachment and return the regarding object.
   (Via regardingObjectID in case of an email and the ObjectID in case of an annotation)
   If the regarding entity is of type contact, return the property fullname.

3. Return the createdon of the entity, the attachment is associated with (Email or annotation) and
   format it.

The parser will stop at the first match; hence the 3rd option is a fallback, as all entities (Except the actual attachment itself) have a createdon date.

Fixed Functions in detail
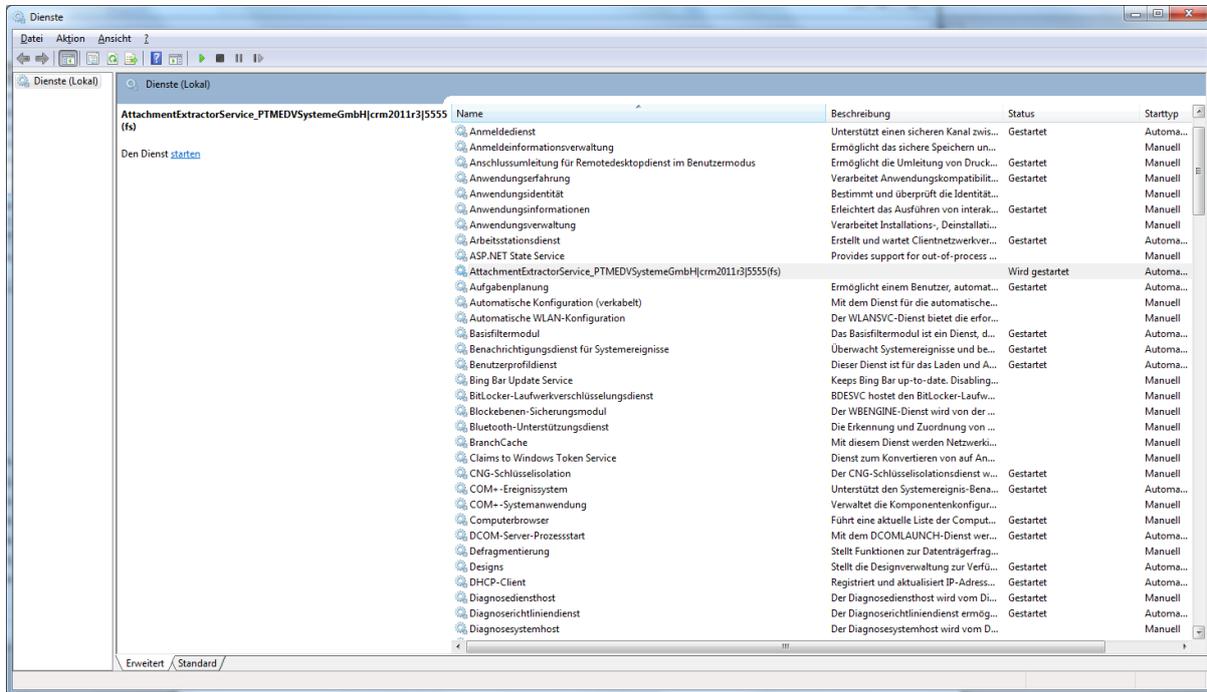
The following functions are available :

{FormatByWeekAndDay} : Treat the referenced field as a date and format by day and week

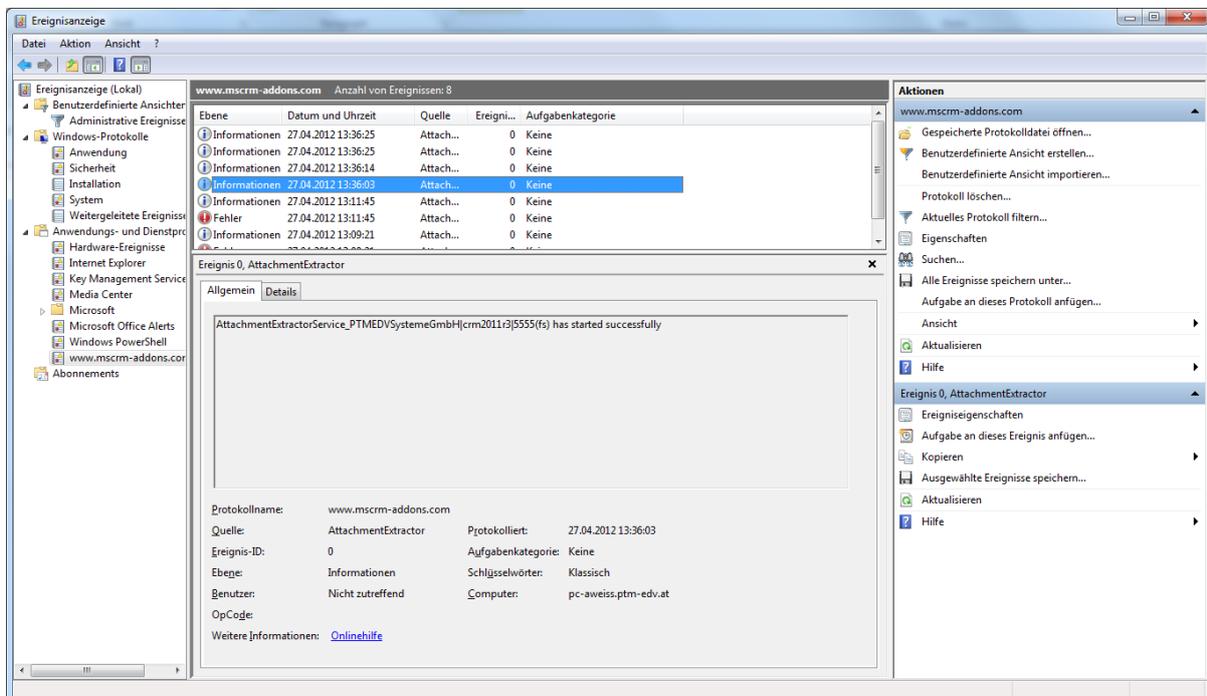{DocumentLocation} : Resolve the EntityReference as CRM would create the Sharepoint location.

{ThrowIfEmpty} : Ignore the record, if the value is not present

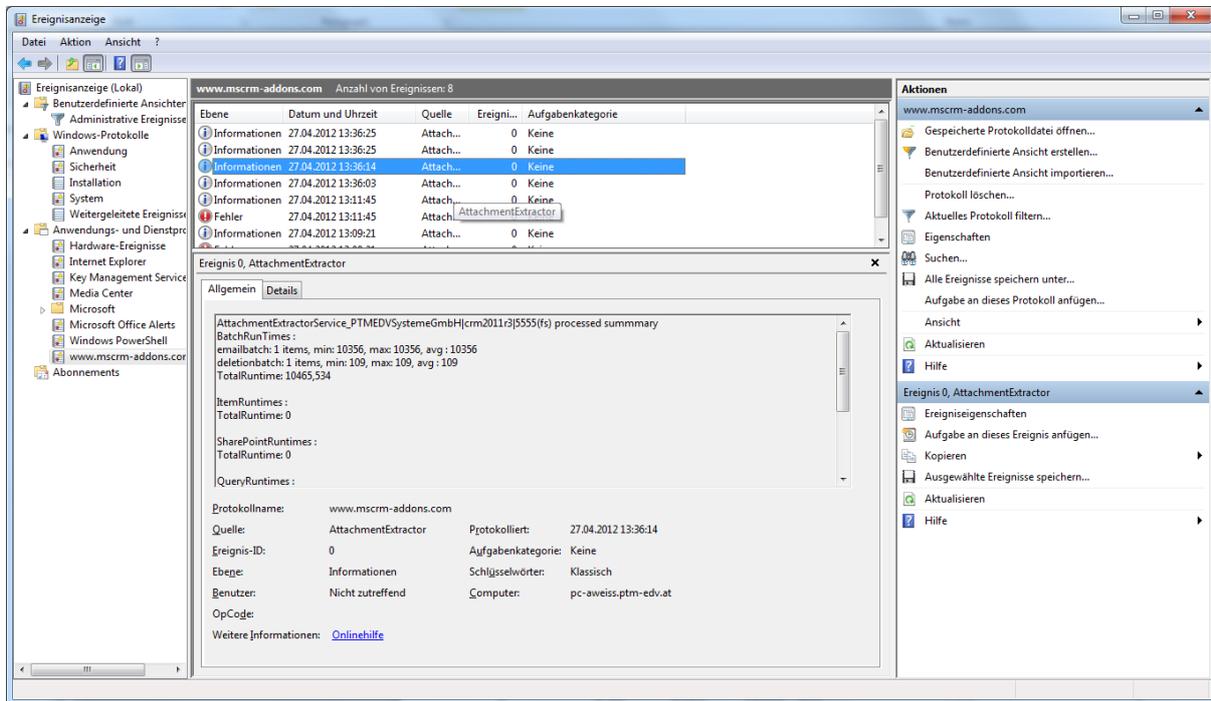{Throw} : Ignore the record, if this branch is evaluated

15 Additional Information

The services panel allows you to check the service status. You can only stop the services from here, but NOT start them anew.

The eventviewer is showing key events for each service.

16   Contact

If you have questions to the product please send an email to
support@mscrm-addons.com
or visit our blog
http://blogs.mscrm-addons.com

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