

Kofax Communication Server

TC/LINK-RS Technical Manual

Version: 10.3.0

Date: 2019-12-13

The KOFAX logo is rendered in a bold, blue, sans-serif typeface. The letters are thick and closely spaced, with a clean, modern aesthetic. The 'K' and 'F' are particularly prominent due to their size and weight.

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Table of Contents

Preface.....	5
Related Documentation.....	6
Chapter 1: Introduction.....	7
Benefits, Strengths.....	7
System Overview.....	7
Functional Overview.....	8
Supported Export Connectors.....	9
Structure of the Product.....	11
Unicode Support.....	13
Chapter 2: Features.....	14
Configuration Repository.....	14
Detecting Configuration Changes.....	18
Message Routing via Events.....	18
Address.....	18
Event Types.....	19
Invoking Export Connectors.....	19
Metadata.....	20
Batch Fields.....	20
Document Index Fields.....	21
Kofax Capture Values.....	22
Image Files.....	22
Maintenance.....	23
Monitoring Release Results.....	23
Trace File.....	23
Standalone Test Application TCReleaseTest.....	24
Chapter 3: Installation.....	26
TC/LINK-RS Installation.....	27
TCReleaseTest Installation.....	29
Export Connector Setup.....	29
Chapter 4: Configuration.....	31
Configuration Tool TCReleaseConfig.....	31
Configuration Settings.....	31
Main Screen.....	32
Batch Classes.....	32

Document Classes.....	35
Export Connectors.....	37
Release Setups.....	41
Deleting Objects.....	53
Settings for Several Object Types.....	56
Support Non Image Files.....	56
Use Original File Names.....	57
Support OCR.....	57
Support Kofax PDF.....	57
Skip First Page.....	57
Registry Values.....	57
Chapter 5: Quick Start Guides.....	59
Kofax Export Connector 8.3.0 R2 for Microsoft SharePoint.....	59
Kofax Export Connector 8.0.0 for Documentum Content Server.....	59
Kofax Export Connector 7.5 for OpenText eDocs DM.....	59
Kofax Export Connector 7.0 for IBM DB2 Content Manager Enterprise.....	60
Kofax Export Connector 8.2.0 for IBM FileNet Content Manager.....	60
Kofax Export Connector 1.1.0 R2 for TotalAgility.....	60
Kofax Export Connector 1.0.0 for CMIS.....	61
Error Installing Export Connector.....	61
Document Index Fields and SharePoint Integration.....	61
Chapter 6: Restrictions.....	62
No Parallel Installation of Kofax Capture.....	62
Kofax PDF Format Not Supported.....	62
Adobe PDF Format Not Supported.....	62
No Real OCR.....	62
Non-Image Files Not Supported.....	62
Messages Without Image Not Supported.....	62
Using Release Events for Link Queues.....	63
Use TIF Queue for Events.....	63
Dedicated Release Setups for Inbound and Outbound Messages.....	63
Service Restrictions for Events Must Be Configured via TCFW.....	63
Importing XML Files.....	64
Required TC/LINK-RS Configuration Settings.....	64
Chapter 7: Setup Checklist.....	65
Chapter 8: Glossary.....	66

Preface

The product TC/LINK-RS can be used to save Kofax Communication Server messages in any of the document management systems supported by Kofax Export Connectors, without requiring an installation of the full Kofax Capture product.

Related Documentation

This document refers to the following documentation:

- *TC/LINK Technical Manual*: Information about general TCLINK functionality
- *TC/LINK-RS Documentum Integration Technical Manual*
- *TC/LINK-RS FileNet Integration Technical Manual*
- *TC/LINK-RS Hummingbird Integration Technical Manual*
- *TC/LINK-RS IBM CM Integration Technical Manual*
- *TC/LINK-RS SharePoint Integration Technical Manual*

Chapter 1

Introduction

This section provides an introduction to the TC/LINK-RS.

Benefits, Strengths

This product integrates the functionality of Kofax export connectors into Kofax Communication Server. Faxes and text messages can be saved to any of the document management systems (DMS) supported by Kofax Capture without requiring an installation of the full Kofax Capture product.

Saving to the DMS is done by standard Kofax export connectors. Another type of release controller (called TC Release Controller) converts the Kofax Communication Server message into a format that can be used by export connectors.

Fax image files, and some messaging metadata are saved. Optionally, the message text can be saved (if the export connector is configured for “OCR text” release).

The product does not include data capture.
Binary files cannot be saved to the document management system.

If any sophisticated image processing is required, such as data capture from invoices or other forms or eDocuments, the full Kofax Capture will be necessary.

System Overview

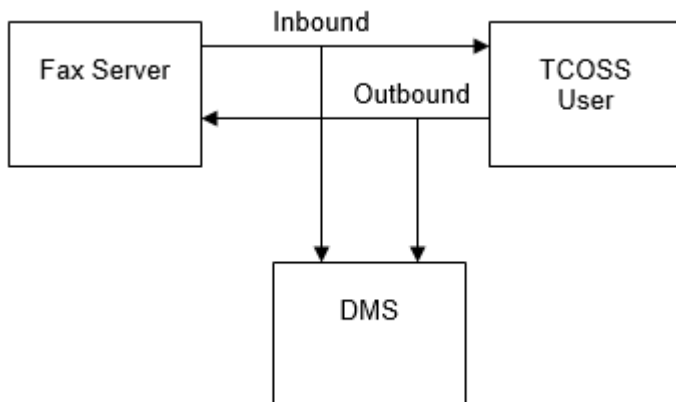


Figure 1. Inbound and outbound faxes are stored in a document management system.

Inbound fax traffic:

When a fax message arrives in the TCOSS user's inbox, a copy is saved in the document management system.

Outbound fax traffic:

After transmission of the outgoing fax, a copy of the outbound message is saved in the document management system.

Functional Overview

Message routing:

Via TC/LINK-RS, TCOSS messages can be routed to a document management system. As with other link types, routing is done via events.

Two new event types, Inbound Release and Outbound Release, have been defined in TCOSS. These events can be assigned globally (such as for a fax channel group) or to single users.

Message types:

The product supports fax and text messages (such as SMS). Binary files cannot be sent to the document management system.

Metadata:

Standard message attributes and fax-specific metadata can be stored as document attributes in the DMS. Examples: fax numbers (sender, receiver), duration, number of pages, cost, cost center.

Graphic images:

The product offers a choice of graphic formats for storing the message content.

Standard Kofax Capture object hierarchy:

The solution emulates the standard Kofax Capture object hierarchy of batches, documents, batch fields and index fields (see [Glossary](#) for definitions).

Different message types, such as incoming and outgoing faxes, are treated as different document classes. For every document class, one or more release setups can be defined.

A TCOSS based configuration folder holds the configured batch classes, document classes, release setups and related information.

A **release setup** defines how the document's metadata and image content shall be saved in the DMS, such as the target location of the document in the DMS, a mapping between document metadata and attributes of the DMS object, the graphic format in which the document's image shall be stored.

If there are several release setups defined for a document class, a single message can be saved into several different document management systems.

A special feature of our solution is that a list of owners has to be defined for a release setup, that is, a release setup can be assigned to individual TCOSS users, but also to a fax channel group.

Global configuration:

Thus, the solution allows a global configuration, where all faxes will be sent to the same document management system in the same way.

The following global configurations are possible:

- All faxes are routed to DMS, using the same release setup.
- All faxes are routed to DMS, with a different release setup for inbound and outbound faxes.
- Only inbound faxes are routed to DMS, using the same release setup.
- Only outbound faxes are routed to DMS, using the same release setup.

User-specific configuration:

On the other hand, it is possible to have a user-specific configuration, where every TCOSS user can optionally have dedicated release setup. Several users can also share a configuration.

In Kofax Capture terminology, every send order routed to TC/LINK-RS is regarded as a document. The document class name is part of the send order's destination address. TC/LINK-RS looks up all release setups defined for the document class and assigned to the event owner.

Configuration tool:

A configuration tool is provided as part of the solution. The release setup configuration is done in the same way as in Kofax Capture, because the configuration GUI is part of the export connector application.

All other configuration items (batch class and document class definitions, installation of export connectors, events) can also be edited in this configuration application.

This is an administrative tool, which will normally not be used by end users. Special user rights (on TCOSS) are needed for changing the configuration.

Change configuration any time, without stopping TC/LINK:

You can change the configuration at any time, but it may take up to 10 minutes until TC/LINK-RS recognizes the changes.

Standard TC/LINK features:

Like other link types, TC/LINK-RS is controlled by the TCSRVS service.

Multiple instances of TC/LINK-RS can run on the same computer.

For failover, it is also possible to install parallel instances of TC/LINK-RS on different computers. In this case, all configured export connectors must be installed on every computer.

Supported Export Connectors

TC/LINK-RS supports the following export connectors:

Export connector	Supported backend systems
Kofax Export Connector 8.3 R2 for Microsoft SharePoint	Microsoft SharePoint 2013 Microsoft SharePoint 2010 Microsoft Office SharePoint Server 2007
Kofax Export Connector 8.0 for Documentum Content Server	EMC Documentum 6.0 EMC Documentum 6.5 EMC Documentum 6.6 EMC Documentum 6.7 EMC Documentum 7.0
Kofax Export Connector 8.0.0 for Documentum Content Server	Documentum 5.1 – 5.3
Kofax Export Connector 8.0 for OpenText eDocs DM	OpenText eDocs Hummingbird DM/RM 5.2.1 OpenText eDocs Hummingbird DM/RM 5.3
Kofax Export Connector 7.5 for OpenText eDocs DM	OpenText eDocs Hummingbird DM/RM 6.0
Kofax Export Connector 7.5 for OpenText eDocs DM	Hummingbird DM 5.0 Hummingbird Enterprise – DM 5.1 Hummingbird Enterprise – DM 5.1.05
Kofax Export Connector 7.0 for IBM DB2 Content Manager Enterprise (formerly called Ascent 7.0 Release Script for IBM DB2 Content Manager)	IBM DB2 Content Manager Enterprise 8.3 IBM DB2 Content Manager Enterprise 8.4, 8.4.1
Kofax Export Connector 8.2 for IBM FileNet Content Manager	FileNet Content Manager 4.5 FileNet Content Manager 4.5.1 FileNet Content Manager 5.0 FileNet Content Manager 5.1
Kofax Export Connector 8.2.0 for IBM FileNet Content Manager	FileNet Content Manager 3.0 FileNet Content Manager 3.5
Kofax Export Connector 1.1.0 for TotalAgility	TotalAgility 5.3 TotalAgility 5.4 TotalAgility 5.5
Kofax Export Connector 1.0.0 for CMIS	Alfresco Cloud (AtomPub) Alfresco On-Premise (AtomPub) EMC Documentum 6.7 (AtomPub) EMC Documentum 7.0 (AtomPub) FileNet Content Manager 5.1 (AtomPub and SOAP) Microsoft SharePoint 2013 (AtomPub and SOAP) Microsoft SharePoint 2010 (SOAP)

For information about a specific export connector, see [Quick Start Guides](#) or for a subset of connectors refer to the *TC/LINK-RS Technical Manual*.

Note Only the export connectors listed above are officially supported with TC/LINK-RS.

You can find additional information and documentation about export connectors online:
<http://www.kofax.com/software/capture/export-connectors.php>

Older export connectors for Ascent Capture 6, 7 or 7.5 might be compatible with TC/LINK-RS, but they are NOT officially supported.

Our solution supports only those features that do not rely on a full Kofax Capture installation. Therefore, the following features are not supported:

- Data extraction: only fax metadata can be assigned to document attributes.
- Kofax PDF
- Kofax OCR: The product does not include real OCR.

But, by configuring document class and release setup for “OCR Full Text export”, you can force TC/LINK-RS to release the message text (without text alternative) to an extra document. This may be useful for text messages like SMS.

Structure of the Product

The product consists of the following components:

- TC Release Controller DLL (TCReleaseCtrl.DLL):
This component simulates the original Kofax Capture release controller. It exposes the standard Kofax Capture Release COM interfaces to the export connectors.
Additionally, this DLL is used by the link DLL and by the configuration tool.
The TC Release Controller DLL is the only component that interfaces directly with the configuration data (Release Setup Repository) and with the export connectors.
- TC Release Controller Link DLL (TCLINKRS.DLL):
Like other link DLLs, this module exposes a standard function call interface to the TCLINK process.
- TC Release Controller Configuration Tool (TCReleaseConfig.EXE):
This application must run on the same computer as the link. It provides a graphic user interface where release setups and other configuration items can be created and modified.
This includes an easy way for defining TCOSS events.
- Release setup repository:
A special message folder on the TCOSS server holds information about release setups and other configuration items. Thus, the release setups are available in a central place and are not subject to dirsync.

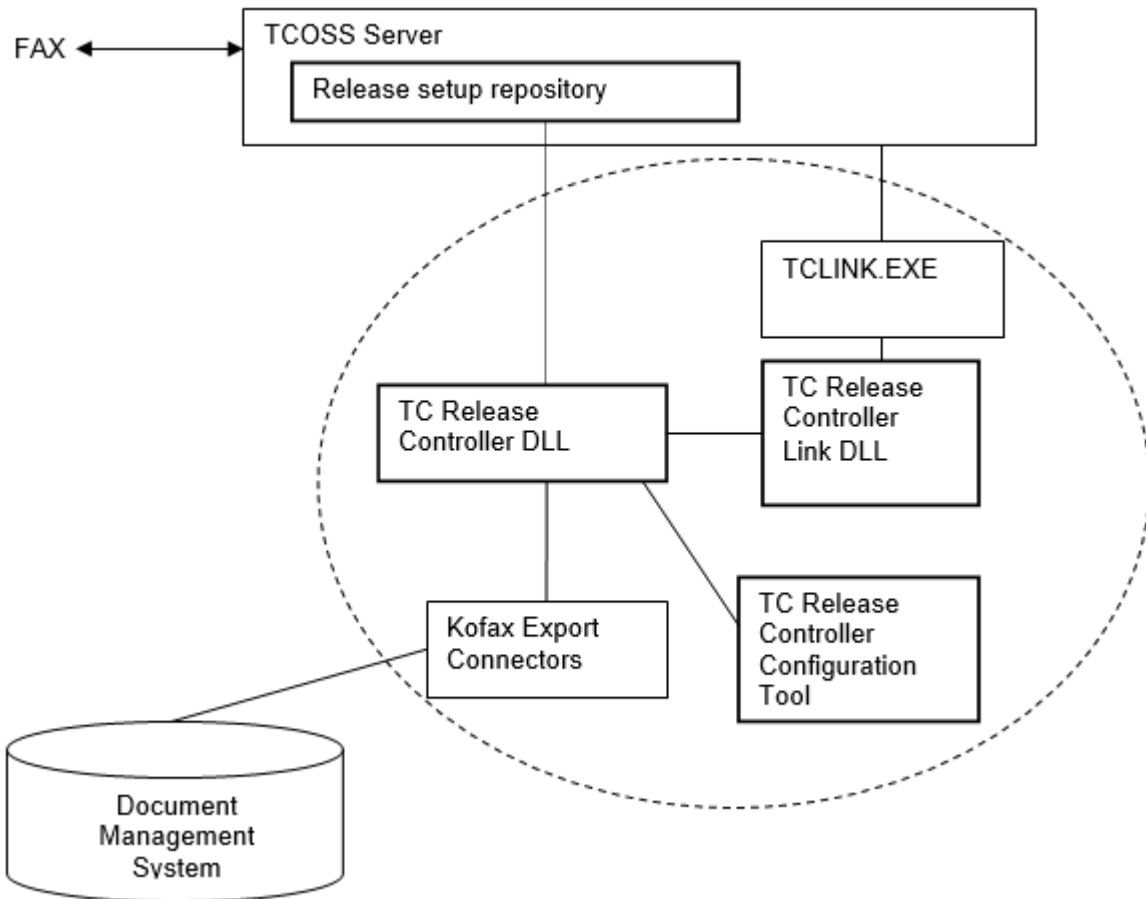


Figure 2. Structure of the product

Location of the modules:

As the TC Release Controller is an in-process COM-server, all applications interacting with it must be on the same computer. The dashed line in the drawing includes all modules located on the same computer.

The repository where release setups are stored (a folder on TCOSS) and the document management system that the export connector interacts with can be located on other computers.

Kofax Export Connectors:

The export connectors are not part of the solution. Kofax provides export connectors for several document management systems for free. Other connector can be obtained from Kofax partners or other software providers.

Most export connectors need client components of the DMS backend system installed to enable access to DMS. These prerequisites must be met before installing the export connector. Although export connector documentation states that Kofax Capture must be installed locally, this is not necessary when working with TC/LINK-RS. In fact, the TC Release Controller takes over standard Kofax Capture Release COM interfaces, thus making a parallel installation of Kofax Capture on the same computer invalid.

The export connector must be installed via its own setup.

Do not change the location of the export connectors components (DLLs, INF files) after setup.

Unicode Support

TC/LINK-RS is compatible with a Unicode TCOSS, however the link has not been updated.

- With a mixed mode Unicode TCOSS, all characters in the legacy TCOSS code page are supported.
- A pure Unicode TCOSS only supports ASCII characters with TC/LINK-RS.

Refer to the *Unicode Installation Guide*.

Chapter 2

Features

This section describes the features of TC/LINK-RS.

Configuration Repository

A special message folder on the TCOSS server holds information about release setups, batch classes and document classes. Thus, the release setups are available in a central place and are not subject to dirsync.

The information is available in messages (TCOSS documents) with XML attachments. The message subject holds the type of the repository object and its name (see below).

To allow tests without a TCOSS connection, the TC Release Controller can optionally retrieve the XML files from a directory.

Note

This section is only for better understanding.

These messages or their attachments should never be changed directly. The configuration tool TC/ReleaseConfig should be used for changing the configuration. A more detailed description of the configuration parameters follows in [Configuration Tool TCReleaseConfig](#)

Batch classes:

Every batch class definition is stored in an individual message. The message filename starts with "BC_". For the start, only 1 batch class will be available. The XML attachment holds a few general properties and the list of batch field definitions. The XML field INTERNAL_NAME holds the name of the TCOSS message.

See below for an example:

```
<?xml version="1.0" encoding="UTF-8" ?>
- <BATCH_DEF>
  <NAME>Standard</NAME>
  <INTERNAL_NAME>BC_18AE0A90</INTERNAL_NAME>
  <DESCRIPTION>TOPCALL Batch</DESCRIPTION>
  <RELEASE_ORIGINAL_FILE_NAMES>0</RELEASE_ORIGINAL_FILE_NAMES>
  <PRIORITY>3</PRIORITY>
  <SUPPORTS_NON_IMAGE_FILES>0</SUPPORTS_NON_IMAGE_FILES>
- <BATCH_FIELDS>
  - <BATCH_FIELD>
    <BF_NAME>Subject</BF_NAME>
    <BF_TYPE>12</BF_TYPE>
    <BF_TCSI_FIELD>TS_REF</BF_TCSI_FIELD>
  </BATCH_FIELD>
  + <BATCH_FIELD>
  + <BATCH_FIELD>
  + <BATCH_FIELD>
  + <BATCH_FIELD>
  + <BATCH_FIELD>
  </BATCH_FIELDS>
</BATCH_DEF>
```

Figure 3. Batch class definition in XML format

Document classes:

Every document class definition is stored in an individual message. The message filename starts with "DC_".

The XML attachment holds a few general parameters of the document class, the batch class internal name, and a list of available index fields. The XML field INTERNAL_NAME holds the name of the TCOSS message.

Example:

```

<?xml version="1.0" encoding="UTF-8" ?>
- <DOCUMENT_DEF>
  <DOCID>411806379</DOCID>
  <NAME>Standard</NAME>
  <INTERNAL_NAME>DC_18AE0AD3</INTERNAL_NAME>
  <DESCRIPTION>Fax Documents</DESCRIPTION>
  <BATCH_DEF>BC_18AE0A90</BATCH_DEF>
  <OCR_ENABLE>0</OCR_ENABLE>
  <SKIP_FIRST_PAGE>0</SKIP_FIRST_PAGE>
  <PDF_SELECTED>0</PDF_SELECTED>
- <INDEX_FIELDS>
  - <INDEX_FIELD>
    <FIELD_NAME>OriginatorNumber</FIELD_NAME>
    <FIELD_TCSI />
    <REL_FIELD_ID>1</REL_FIELD_ID>
    <FIELD_TYPE>12</FIELD_TYPE>
    <TYPE_NAME>string128</TYPE_NAME>
    <TYPE_DESCRIPTION>string128</TYPE_DESCRIPTION>
    <TYPE_SCALE>0</TYPE_SCALE>
    <TYPE_WIDTH>128</TYPE_WIDTH>
  </INDEX_FIELD>
  + <INDEX_FIELD>
  + <INDEX_FIELD>
  + <INDEX_FIELD>
  + <INDEX_FIELD>
  </INDEX_FIELDS>
</DOCUMENT_DEF>

```

Figure 4. Document class definition in XML format

Export connectors:

For every export connector, there is a message with prefix "SC_". The attached XML file holds the export connector parameters as defined in the INF file supplied by the author of the export connector (see [Export Connectors](#) for details). The XML field INTERNAL_NAME holds the name of the TCOSS message.

The following example shows the definition of the sample database export connector delivered with Kofax Capture:

```

<?xml version="1.0" encoding="UTF-8" ?>
- <SCRIPT_DEF>
  <INTERNAL_NAME>SC_18A76E78</INTERNAL_NAME>
  <NAME>Ascent Capture Database</NAME>
  <REL_PROG_ID>DBRel.kfxreleasescript</REL_PROG_ID>
  <REL_VERSION>6.0</REL_VERSION>
  <REL_MODULE>D:\Program Files\Ascent\Source\Release\Database\.\DBRel.dll</REL_MODULE>
  <SETUP_PROG_ID>DBRel.kfxreleasesetupscript</SETUP_PROG_ID>
  <SETUP_VERSION>6.0</SETUP_VERSION>
  <SETUP_MODULE>D:\Program Files\Ascent\Source\Release\Database\.\DBRel.dll</SETUP_MODULE>
  <SUPPORTS_NON_IMAGE_FILES>1</SUPPORTS_NON_IMAGE_FILES>
  <SUPPORTS_KOFAX_PDF>1</SUPPORTS_KOFAX_PDF>
  <SUPPORTS_ORIGINAL_FILE_NAME>1</SUPPORTS_ORIGINAL_FILE_NAME>
  <REMAIN_LOADED>1</REMAIN_LOADED>
</SCRIPT_DEF>

```

Figure 5. Export connector definition in XML format

Release setups:

For every release setup, there is a message with prefix "RS_". The attached XML file holds general release setup parameters, the internal names of export connector and document class, and the lists of release links and custom properties. The XML field INTERNAL_NAME holds the name of the TCOSS message.

Optionally, the password and one custom property value can be stored encrypted (standard TCOSS password encryption algorithm).

Example:

```
<?xml version="1.0" encoding="UTF-8" ?>
- <RELEASE_SETUP>
  <NAME>Release to Access</NAME>
  <INTERNAL_NAME>RS_18A76E7E</INTERNAL_NAME>
  <DOCUMENT_CLASS>DC_18A60445</DOCUMENT_CLASS>
  <RELEASE_SCRIPT>SC_18A76E78</RELEASE_SCRIPT>
  <CONNECT_STRING>C:\RELEASE_TEST_DB\FaxTraffic.mdb</CONNECT_STRING>
  <TABLE_NAME>IndexFields</TABLE_NAME>
  <USER_NAME>Admin</USER_NAME>
  <PASSWORD />
  <SKIP_FIRST_PAGE>0</SKIP_FIRST_PAGE>
  <IMAGE_FORMAT>4</IMAGE_FORMAT>
  <IMAGE_STORAGE>0</IMAGE_STORAGE>
  <RELEASE_DIR>C:\RELEASE_TEST_DB</RELEASE_DIR>
  <TEXT_FILE_DIR />
  <KOFAX_PDF_DIR />
- <RELEASE_LINKS>
  - <RELEASE_LINK>
    <RL_SOURCE>TimeAction</RL_SOURCE>
    <RL_DESTINATION>TimeReceived</RL_DESTINATION>
    <RL_SOURCE_TYPE>3</RL_SOURCE_TYPE>
  </RELEASE_LINK>
  + <RELEASE_LINK>
  + <RELEASE_LINK>
  + <RELEASE_LINK>
  + <RELEASE_LINK>
  + <RELEASE_LINK>
  </RELEASE_LINKS>
+ <CUSTOM_PROPERTIES>
</RELEASE_SETUP>
```

Figure 6. Release setup definition in XML format

Assignments:

A single message (subject "ASSIGNMENTS") holds the correlation between users and release setups, including the document class internal name.

Example of the attached XML file:

```

<?xml version="1.0" encoding="UTF-8" ?>
- <ASSIGNMENTS>
- <ASSIGNMENT>
  <SETUP>RS_18CDDA21</SETUP>
  <DOCCLASS>DC_18CDD9FE</DOCCLASS>
  <USER>F</USER>
</ASSIGNMENT>
- <ASSIGNMENT>
  <SETUP>RS_18CDDA43</SETUP>
  <DOCCLASS>DC_18CDDA07</DOCCLASS>
  <USER>F</USER>
</ASSIGNMENT>
</ASSIGNMENTS>

```

Figure 7. Assignments in XML format

Detecting Configuration Changes

When TC/LINK-RS starts, it copies all configuration objects (batch classes, document classes and others) from the TCOSS folder to the local folder defined in registry value Options\DirConfig.

It works with the local copies, but updates them if a message must be processed and if the local copies are older than 10 minutes.

A locking mechanism guarantees that the files are only updated if they are not used by another link instance.

Note The configuration tool (TCReleaseConfig) also has local copies of the configuration, but they are in a different folder (sub folder ConfigTCOSS).

Message Routing via Events

This section describes message routing via events.

Address

Faxes are forwarded to TC/LINK-RS via event send orders. The document class name (internal name or display name) is part of the event destination address, such as:

Address	Description
DMS,DC_18CDDA07	Service DMS, number = internal document class name
DMS,FAXIN	Service DMS, number = document class display name
FREE,TCLRSQ4:DC_18CDDA07	Service FREE, number = prefix + internal document class name

Note Events created via the configuration tool TCReleaseConfig automatically use the internal document class name. This is the preferred way of addressing, as the internal name is unique and cannot be changed. If you use the document class display name in the event address and rename the document class afterwards, you have to adjust the target address of the events manually.

Event Types

For a global configuration (one release setup for all fax messages), you have to use event types “Inbound Release” and “Outbound Release”. These event types were especially designed for this product. Their advantage is that they are configured once for the channel group user, and overrule any user-specific release events. Additionally, they are triggered whenever a fax is sent or received via a member of the channel group, no matter what the termination settings of the send order are like. So it is transparent for the end user whether his fax messages are sent to TC/LINK-RS or not. No special send options are needed.

For a user-specific configuration, using the Release Events also is the method of choice, - as the end users need not change their send options when sending a fax.

The following table explains, how release events defined for a queue (or channel group) always overrule release events defined for a normal user.

Sending from	Sending to	Originator events defined	Recipient events defined	Event triggered
User	User	Not relevant	Not relevant	No
User	Queue (fax, link)	Outbound	Outbound	Outbound To (queue)
User	Queue (fax, link)	Outbound		Outbound From (user)
Queue	User	Inbound	Inbound	Inbound From (queue)
Queue	User		Inbound	Inbound To (user)
Queue	Queue	Inbound	Inbound, Outbound	Inbound From (queue)

Note Inbound release events are only triggered if the send order was really posted via a fax channel or a link. If you log in as user F via TCfW and send a message, this will not trigger an inbound release event.

It is nevertheless possible to use other event types (In, DelNotif, Non-delNotif, Sending Copy).

Invoking Export Connectors

For every send order, TC/LINK-RS executes the export connectors from all release setups matching ...

- the document class (different document classes for inbound and outbound fax) and ...
- the event owner (system-wide events belong to the channel group user, individual events belong to normal users).

For every matching release setup, TC/LINK invokes the export connector and provides the message contents and metadata for release to the DMS.

TC/LINK then terminates the send order on TCOSS. By default, send orders will always be terminated positively, even if a single export connector fails (this can be changed by setting registry value *Options \NegTermOnError* to 1).

The result of every release process can be viewed in the event log.

Metadata

Export connectors can handle three categories of metadata: batch fields, document index fields and Kofax Capture values.

Batch Fields

In standard Kofax Capture, a batch is a pile of paper documents that are scanned together. A batch usually contains similar documents, but not necessarily of the same document class.

Batch fields contain common attributes of all documents in the pile.

In the TCOSS world, there is no functional equivalent of a batch. It is sufficient to define one batch class (a generic "TCOSS Message"). TC/LINK-RS makes standard TCOSS message attributes (first level TCSI fields in the send order) available as batch fields. Some attributes are available only for the sake of completeness, whereas others (such as cost center, duration of transmission) can provide interesting information to be saved with the document.

In the batch class definition, the batch fields can be selected from the following list of TCSI fields and can be given descriptive names.

Descriptive name (default)	TCSI field name	Available for	Comments
Cost	TS_COST	In, Out	
Cost Center	TS_COST_CENTER	Out	
Creation Time	TIME_CREATED	In, Out	
Document Class	INT_DOC_CLASS	In, Out	
Document Error	TS_DOCUMENT_ERR	In, Out	
Document Number	TS_DOC_NR	Out	
Duration	TS_DURATION	Out	
Event Types	INT_EVENT_TYPES	In, Out	The event type used for archiving
File Name	TS_FILE_NAME	In, Out	
File Size	INT_FILE_SIZE	In, Out	
Index of Recipient	INT_ER_RECIPIENT	In, Out	
Last MDA Action	TS_LAST_MDA_ACTION	Out	

Descriptive name (default)	TCSI field name	Available for	Comments
Last MDA Note	TS_LAST_MDA_NOTE	Out	
Last User Action	INT_LAST_USER_ACTION	In, Out	
Localized Recipient Address	TS_LOCALIZED_ADDR	Out	
Masked State of Send Order	INT_STATE_MASKED	Out	
Message ID	TS_TC_MSG_ID	In, Out	
Message Type	INT_MSG_TYPE	In, Out	Always 49 = normal
Node List	TS_NODELIST	In, Out	
Number of Alternate Addresses Left	INT_ER_ALT_ADDR_LEFT	In, Out	
Number of Pages	INT_NPAG	In, Out	
Original File Name	TS_ENV_NAME_POSTED	In, Out	
Originator	TS_ORIGINATOR	Out	
Originator Info	TS_ORIGINATOR_INFO	In, Out	
Priority	INT_PRIORITY	In, Out	
Recipient	TS_RECIPIENT	Out	
Recipient Info	TS_RECIPIENT_INFO	Out	
Send Time	TIME_ACTION	In, Out	
State of Send Order	INT_STATE	Out	
Subject	TS_REF	In, Out	
Suspected Duplicate	INT_SUSP_DUPL	In	
TCOSS Folder	TS_TOS_FOLDER	In	

In: Data available for event types Inbound Release and In

Out: Data available for event types Outbound Release, DelNotif, Non-delNotif and Sending Copy

Document Index Fields

In Kofax Capture, index fields contain data extracted from the scanned document, such as an invoice number, a customer name, line items of an invoice or purchase order.

Some export connectors offer the possibility to assign documents to different folders on the DMS, matching the folder name with the contents of an index field.

With TC/LINK-RS, no extraction or OCR is available. The standard TCOSS message attributes can also be used as index fields. Additionally, some fax-specific metadata are available as index fields. The following index fields can be specified in the document class definition (names must match, they are treated case-insensitively):

- Direction: IN (for in-bound faxes) or OUT (for out-bound faxes)
- OriginatorID: sender's short name

- OriginatorName: sender's full name (for out-bound faxes)
- OriginatorNumber: sender's fax number
- OwnID: the TCOSS user's short name (independent of the direction)
- OwnName: the TCOSS user's full name (independent of the direction)
- OwnNumber: the TCOSS user's fax number (independent of the direction)
- RecipientID: recipient's short name
- RecipientName: recipient's full name
- RecipientNumber: recipient's fax number
- RemoteID: the remote person's short name (independent of the direction)
- RemoteName: the remote person's full name (independent of the direction)
- RemoteNumber: the remote person's fax number (independent of the direction)
- RemoteStationID: remote fax station ID (for out-bound faxes)

Kofax Capture Values

Kofax Capture values (also called batch variables) contain information about the processing of the batch or document. With Kofax Capture, this includes information about involved Kofax Capture services, time stamps, computer names and more.

With TCOSS, a minimum set of attributes is available:

- Batch Class Name
- Current Date (UTC based)
- Current Time (UTC based)
- Document Class Name
- Document ID
- Link ID (name of the link instance or application that invoked the export connector)
- TimeStampIBM_UTC (timestamp in IBM TimeStamp format, UTC time)
- TimeStampIBM_Local (timestamp in IBM TimeStamp format, local time of TC/LINK-RS computer)

Image Files

The export connector offers a list of image formats for storing the document contents. Some connectors even allow choosing 2 formats.

Image conversion is done via TCOSS algorithms (TCIMG32.DLL). Image formats that need Kofax Capture software (Kofax PDF) or third-party software (ADOBE PDF) are not available.

The list of image formats to choose from depends on the export connector. Please refer to the individual documentation of an export connector to see which formats are supported in combination with TC/LINK-RS.

Maintenance

This section describes the maintenance of TC/LINK-RS.

Monitoring Release Results

For every release attempt, TC/LINK writes an event log entry into the Windows application event log, indicating success or failure.

If TC/SNMP is installed locally, these events can be converted into SNMP traps. This enables monitoring via a management tool, such as HP/OpenView.

ID	Text	Description
1950 (Information)	Document %1 was successfully released via release setup %2	After every successful release. %1: TCOSS file name %2: Release setup name
1951 (Warning)	Document %1 could not be released via release setup %2 (%3)	For every unsuccessful release. %1: TCOSS file name %2: Release setup name %3: Error description
1952 (Warning)	Document %1 could not be released (%2)	For an error that affects the complete document (before release is attempted). %1: TCOSS file name %2: Error description

Trace File

Events (see above) and errors are always written to the TC/LINK trace file. Additional trace information can be configured, on a per module basis.

General\Tracelevel >= 50 : Turns on the function trace for TCLINKRS.DLL (all functions)

Options\TracelevelTCRelease: Sets the depth of TCRELEASECTRL.DLL function trace.

0 (default): no function trace, 1: first level, 2: up to second level and so on. Maximum function trace level is 20. For performance reasons, frequently used functions are excluded from the function trace.

Options\TraceComObjects: 0 (default) or 1. If 1, Trace entries are written whenever a COM object is created or destroyed. Useful for development (troubleshooting memory leaks).

Additionally, the trace file contains any error messages written by the export connector (written at any trace level).

The origin of the trace line can be distinguished via a prefix:

- LNK: written by TCLINKRS.DLL
- REL: written by TCRELEASECTRL.DLL
- SCR: error logged by the export connector

- SCR MESSAGE: error message sent by the export connector

Standalone Test Application TCReleaseTest

It is possible to test the release process without a TCOSS server.

This is done via the standalone test tool TCReleaseTest.exe, which processes TCOSS messages stored as ASCII files. TCReleaseTest is a console application. It expects the file name as a parameter. Optionally, a document class and user name can also be specified as parameters.

Syntax:

```
TCReleaseTest <filename> <documentclass> <user>
```

The test tool is a small wrapper around the standard TC/LINK-RS functionality. The only difference between TC/LINK-RS and TCReleaseTest is that TC/LINK-RS retrieves its input from the TCOSS server whereas TCReleaseTest reads an input file.

To create test files, TC/LINK-RS can be configured to store all messages as ASCII files in a local directory. These messages can be used by TCReleaseTest afterwards.

The tool can be used for troubleshooting and for automated tests.

TCReleaseTest Configuration

Make sure you have batch class, document class, export connector and release setup installed in the TCReleaseTest configuration. The release setup must be assigned to a user name.

To keep the following description simple, we assume that your TCReleaseTest configuration (test environment) consists of 1 batch class with 1 document class, 1 export connector and 1 release setup (for the document class and export connector mentioned before). The release setup is assigned to a user TEST.

The configuration need not be the same as with TC/LINK-RS. You can use the test file with a completely different export connector.

Creating a Test File for TCReleaseTest

In the TC/LINK-RS registry, set the following values:

```
HKLM\SOFTWARE\Topcall\TCLINKRS\Options\SaveFiles = 1
```

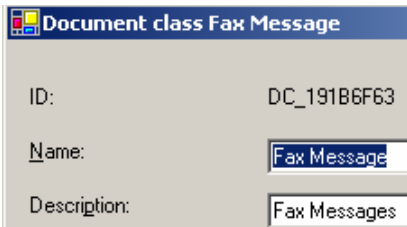
```
HKLM\SOFTWARE\Topcall\TCLINKRS\Options\DirTempFiles = C:\TCOSS\TCLP\TCLINKRS\COPIES
```

Restart TC/Link-RS and send a message via TC/LINK-RS.

After TC/LINK-RS processed the message, there is a file with the extension .tmp in the COPIES folder (such as "2.tmp").

Finding the Document Class of the Test Message

Use TCReleaseConfig to find out the ID of the document class installed in the test environment:



The ID is also part of the document class XML file name

(C:\TCOSS\TCLP\TCReleaseTest\CONFIG\DC_191B6F63.XML).

Run TCReleaseTest

Start the test program with the following parameters:

```
C:\TCOSS\TCLP>c:\tcoss\tclp\tcreleasetest.exe c:\tcoss\tclp\tclinkrs\copies\2.tmp DC_191B6F63 TEST
```

This tells the test program to use the document class from the test environment (instead of the original document class from TC/LINK-RS) and the user TEST (instead of the original owner of the release setup).

Check the result of the release process.

Chapter 3

Installation

Use the Kofax Communication Server setup to install the components of the product:

- TC Release Controller Link (TC/LINK-RS)
- TC Release Controller Configuration Tool (TCReleaseConfig)
- TC Release Controller Test Application (TCReleaseTest)

After installation, no release setups are defined yet. You can install export connectors and configure setups via the configuration tool. For user-specific configuration, you can use TCfW to assign release events to individual users.

Prerequisites:

The configuration tool needs the Microsoft .Net Framework 2.0 installed. These files are not part of KCS setup. On Windows Server 2008 and later, the Microsoft .NET Framework is part of the operating system.

On older Windows versions, it must be installed separately before running the application: You can download the .Net Framework (dotnetfx.exe, version 2.0) from the Microsoft download web page.

Kofax Communication Server:

The event types “Inbound Release” and “Outbound Release” are implemented in TCROSS version 7.65.00 or above.

Kofax Communication Server – Client Applications:

TCfW version 5.22.00 or above is needed to edit these events in the user profiles.

Installation:

The Kofax Communication Server Setup (in the Links group) contains an item “TC Release Controller (Group)”. This group consists of TC/LINK-RS and TCReleaseTest. The configuration tool is installed automatically if you select one of them.

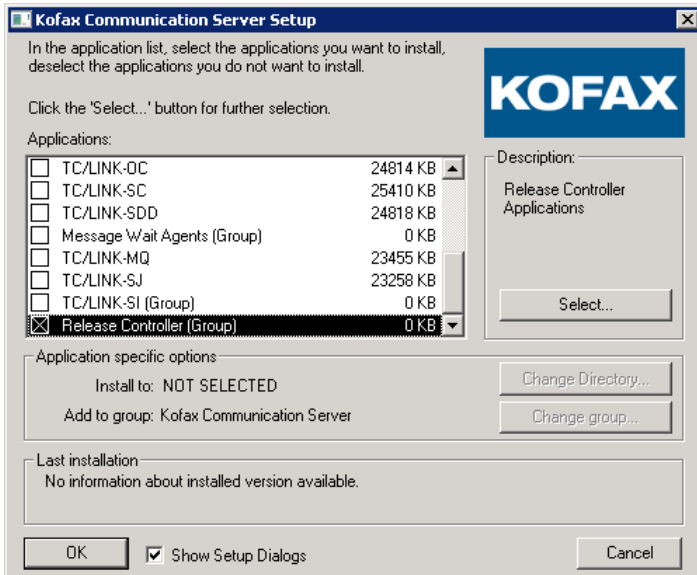


Figure 8. KCS Setup – Links group

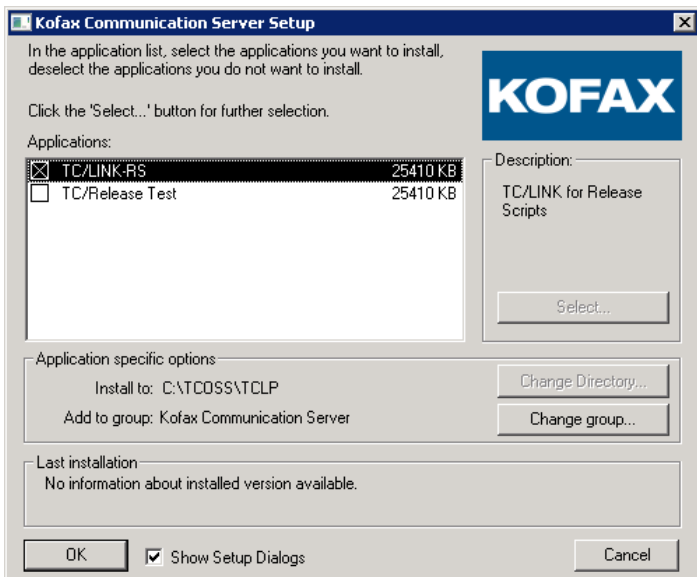


Figure 9. Release Controller (Group)

TC/LINK-RS Installation

Get a license key for TC/LINK-RS and enter it via the Licenses application. Additionally, a TFC license is necessary for the TCReleaseConfig tool.

In simple installation mode, Setup only requires basic TCLINK parameters (as described in the *TC/LINK Technical Manual*). It does not require any link-specific parameters.

In advanced installation mode, Setup requires common TCLINK parameters (refer to the *TC/LINK Technical Manual*) and a few TC/LINK-RS specific settings:

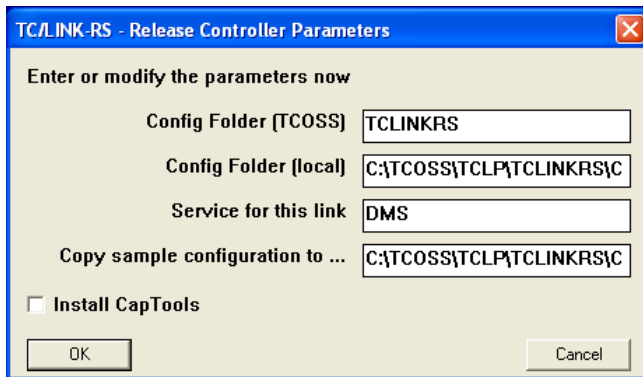


Figure 10. TC/LINK-RS setup parameters

Config Folder (TCOSS)

Specify a TCOSS user whose message store shall hold the configuration repository (all release setups, batch classes and document classes). With configuration option “automatic creation of TCOSS dependencies”, TCLINK will create this user (if not yet existing). The password will be “password” and the user will have read/write access to his message folder and to the user profiles.

Config Folder (local)

During runtime, TC/LINK-RS works with a local copy of the configuration files. Please specify the local directory where these files shall be stored.

Service for this link

If configured for “automatic creation of TCOSS dependencies”, TCLINK creates a service for sending to TC/LINK-RS. This is where the name of this service is specified.

Copy sample configuration to ...

Setup does not install any items to the repository. But it copies a sample batch class definition and a sample document class definition to the local directory you specify here. After installation, the configuration tool can be used to import these sample classes into the repository.

Install CapTools

This option shall be selected when TC/LINK-RS is installed for the first time on this computer. It installs some common modules used by most export connectors. Subsequent export connector installation can overwrite these components with newer versions.

Setup creates two new items in the Kofax Communication Server program group:

- TC_LINK-RS: The TC Release Link
- TCReleaseConfig: The configuration tool

TCReleaseTest Installation

Setup requires a few configuration parameters:

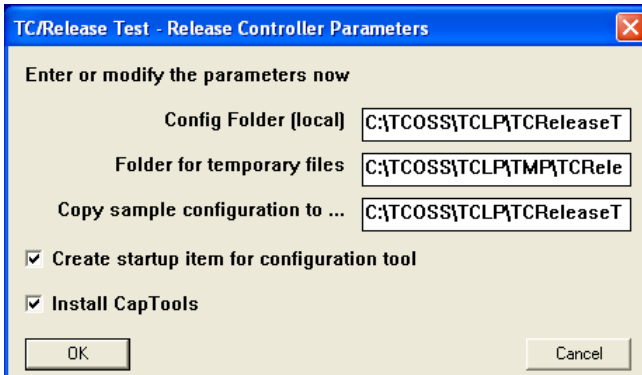


Figure 11. TCReleaseTest setup parameters

Config Folder (local)

TCReleaseTest works with a local (file-based) repository. Specify the local directory where to store configuration files.

Folder for temporary files

Select a folder where temporary files (pages) shall be stored.

Copy sample configuration to ...

Setup does not install any items to the repository, but it copies a sample batch class definition and a sample document class definition to the local directory you specify here. After installation, the configuration tool can be used to import these sample classes into the repository.

Create startup item for the configuration tool

If this checkbox is selected, Setup will create an item TCReleaseConfig in the program group Kofax Communication Server Applications (not needed if TC/LINK-RS is installed on the same computer).

Install CapTools

This option shall be selected when TCReleaseTest is installed for the first time on this computer. It installs some common modules used by most export connectors. Subsequent export connector installation can overwrite these components with newer versions.

Export Connector Setup

Kofax Export Connectors must be installed via their own setup program.

Run export connector setup after installing TC/LINK-RS. The export connector setup usually relies on some registry values written by TC/LINK-RS setup.

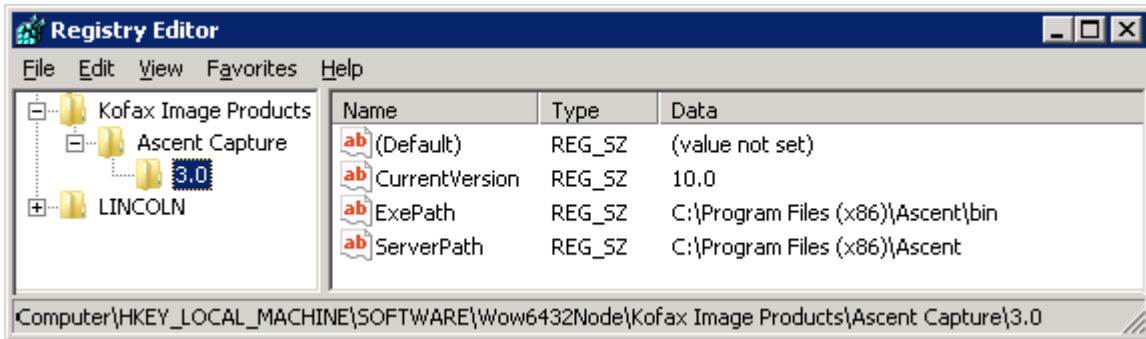
TC/LINK-RS setup simulates a locally installed Kofax Capture version 10.0. For this purpose, it does the following:

1. Creates the following registry value:

```
HKLM\Software\Wow6432Node\Kofax Image Products\Ascent Capture  
\3.0\CurrentVersion
```

2. Sets it to "10.0".

For export connectors based on other Kofax Capture versions, you have to modify the CurrentVersion registry value before installing the export connector. For example, set it to "7.5" before installing export connectors based on Kofax Capture 7.5.



Chapter 4

Configuration

This section describes the configurations of TC/LINK-RS.

Configuration Tool TCReleaseConfig

The TC Release Controller Configuration Tool is a Windows application that must be run on the same workstation where either TC/LINK-RS or the test application TCReleaseTest is installed. It is an administrative tool for export connector and release setup maintenance.

The person using this tool must be a local administrator and must have access to the Release Setup Repository. With TC/LINK-RS, the Release Setup Repository is a private message folder on TCOSS. The test application TCReleaseTest uses a file-based repository (local directory).

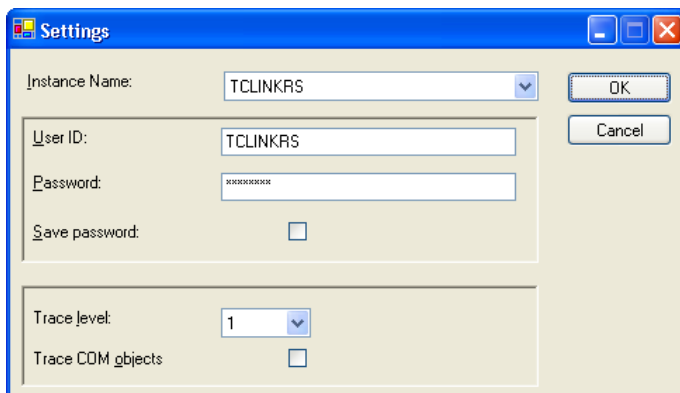
The configuration tool allows also configuring events for user-specific or system-wide configuration. For this purpose, the administrator needs write access to the user profiles.

The user interface for release setup maintenance is similar to the UI that Kofax Capture release currently uses. Nevertheless, additional options (such as assigning a release setup to a user) give the application an individual look-and-feel.

The configuration tool uses the TC Release Controller DLL to connect to the Release Setup Repository and to interface with export connectors.

The configuration tool requires a TFC license to connect to TCOSS.

Configuration Settings



The screenshot shows a Windows dialog box titled "Settings". It contains the following fields and controls:

- Instance Name:** A dropdown menu with "TCLINKRS" selected.
- User ID:** A text input field containing "TCLINKRS".
- Password:** A text input field with masked characters (asterisks).
- Save password:** An unchecked checkbox.
- Trace level:** A dropdown menu with "1" selected.
- Trace COM objects:** An unchecked checkbox.
- Buttons:** "OK" and "Cancel" buttons are located on the right side of the dialog.

Figure 12. TCReleaseConfig settings screen

Instance Name

TCReleaseConfig needs some parameters from the link registry. Therefore you have to choose the name of the link instance (or TCReleaseTest, if it is installed). With TC/LINK-RS, the tool uses a TCOSS-based repository (release setups and others stored in a folder on TCOSS). With TCReleaseTest, a local repository is used (release setups and others stored as files in a directory).

User ID and Password

If you choose a link instance name, the input fields for User ID and Password are enabled. Here you enter the credentials of a TCOSS user who has read and write permissions on the repository folder.

Optionally, you can configure trace settings for this configuration session.

Trace Level

Trace level can be 0 to 20. With level 0, only errors are written. Levels 1 to 20 enable the function trace within the TC Release Controller DLL, level 20 is the maximum function trace.

Trace COM objects

If this checkbox is selected, the trace file will display a line whenever one of the Release Controller's COM objects is created or destroyed.

Click **OK** to proceed or **Cancel** to quit the application.

Main Screen

The main screen shows tabs for definition of batch classes, document classes, export connectors, and release setups.

Batch Classes

You can add, modify, delete, import and export a batch class.

The Batch Classes configuration page shows the list of defined batch classes.

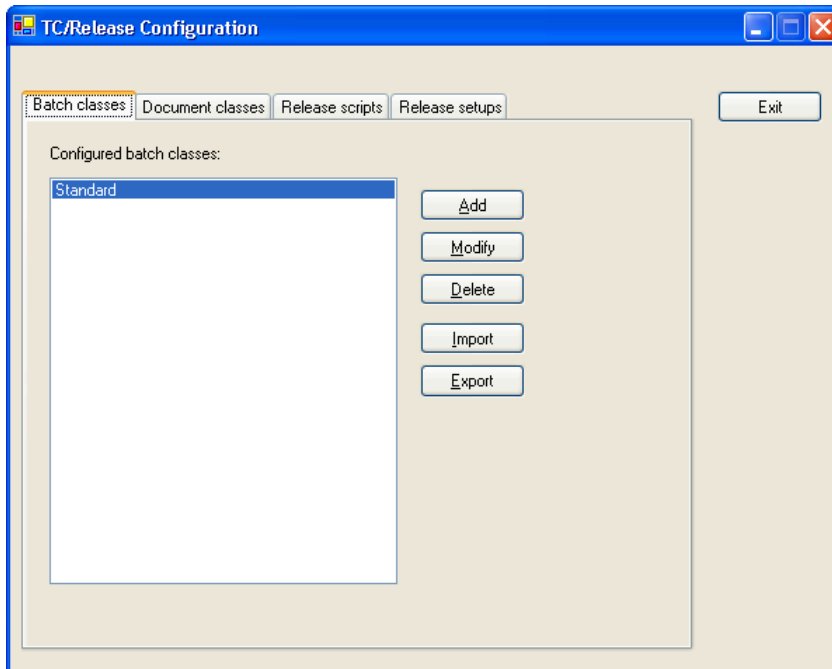


Figure 13. TCReleaseConfig Batch Classes configuration

Add: This button lets you add and edit a new batch class.

Modify: This button lets you edit the details of the selected batch class.

Delete: This button removes the selected batch class.

Import: This button lets you import a batch class from an XML file, such as the sample batch class file installed by Setup.

Export: This button lets you export the selected batch class to an XML file.

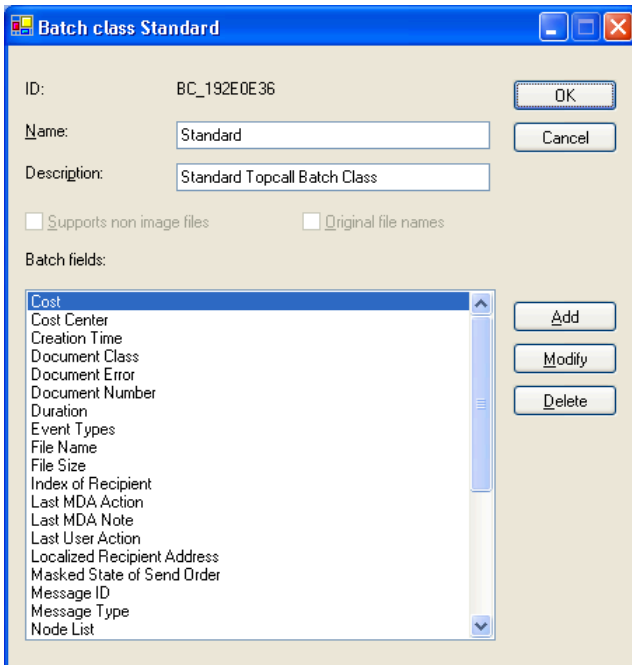


Figure 14. Batch class configuration

The batch class details page shows a few general parameters of the batch class and the list of batch fields.

ID: The ID displayed on top of the page is the name of the corresponding TCROSS repository file.

Name: Batch class name.

Description: Batch class description

Supports non image files: For future use (currently disabled). This option indicates that the documents may contain binary attachments

Original file name: For future use (currently disabled). This option indicates that released files can be provided with their original file names.

Batch fields: A list of batch fields. You can add, modify or delete a batch field.

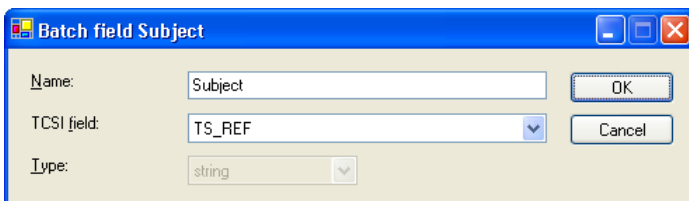


Figure 15. Batch field configuration

A batch field corresponds to a TCSI field. Only first-level TCSI fields in the send order are supported by TC/LINK. Therefore, only those fields can be selected from the TCSI field list.

Document Classes

You can add, modify, delete, import and export a document class.

The Document Classes configuration page shows the list of defined document classes. In this example, class FAXIN is for incoming faxes and FAXOUT is for outgoing faxes.

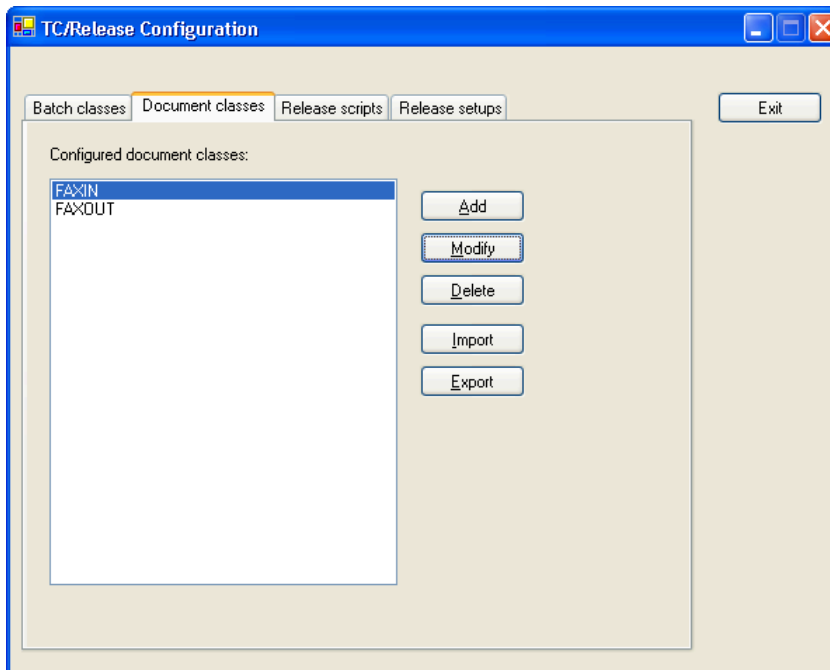


Figure 16. TCReleaseConfig Document Classes configuration

Add: This button lets you add and edit a new document class.

Modify: This button lets you edit the details of the selected document class.

Delete: This button removes the selected document class.

Import: This button lets you import a document class from an XML file, such as the sample document class file installed by Setup.

Export: This button lets you export the selected document class to an XML file.

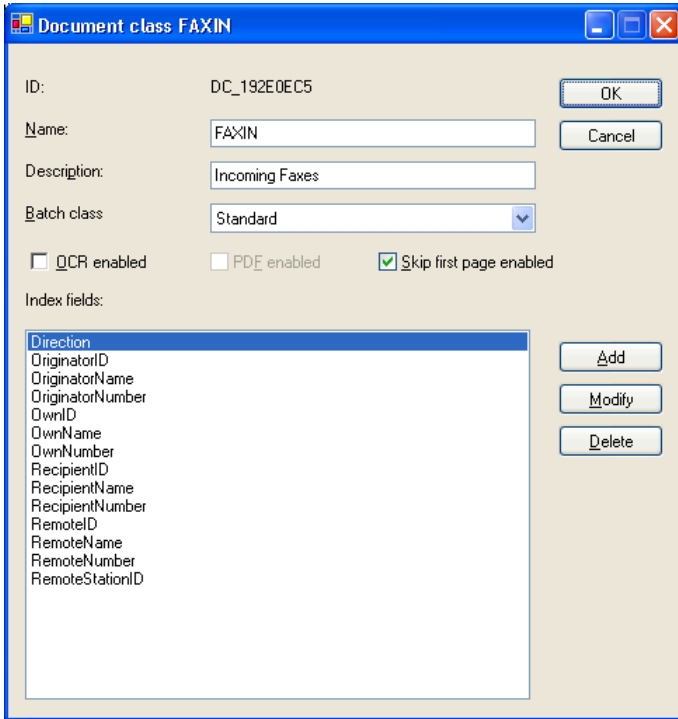


Figure 17. Document class configuration

The document class details page shows some general parameters of the document class, the batch class it belongs to, and a list of index fields.

ID: The ID displayed on top of the page is the name of the corresponding TCROSS repository file.

Name: The name of the document class.

Description: Document class description.

Batch class: The batch class can only be selected when creating a new document class.

OCR enabled: If selected, indicates that the message contains plain text.

PDF enabled: For future use, currently disabled. If selected, indicates that the documents can contain a PDF representation of the message.

Skip first page enabled: If selected, indicates that it is possible to remove the first page during release.

Any release setup linked to the document class can decide whether the first page of a document is part of the released image data or not. (Default: disabled)

You can add, modify or delete an index field.

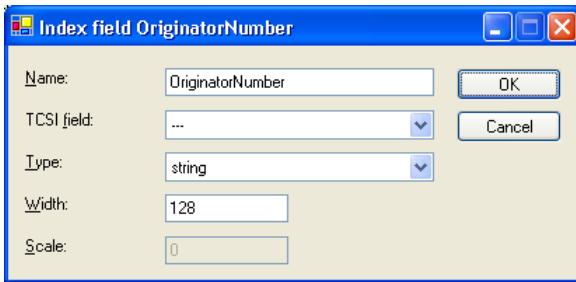


Figure 18. Document index field configuration

The index field details show name, type and dimension of an index field. In the first version, the string, integer and date type fields are supported.

Note You can also define index fields that correspond to TCSI fields, such as the number of pages. If you choose a valid TCSI field name in the combo box, type and width are set automatically.

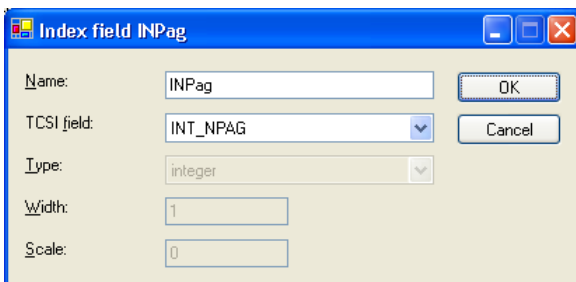


Figure 19. Document index field for TCSI field

Value "---" in the "TCSI field" means that this index field does not correspond to a TCSI field.

Note The index field name must be supported by TC/LINK-RS. See [Document Index Fields](#).

Export Connectors

The Release scripts tab shows the list of installed export connectors.

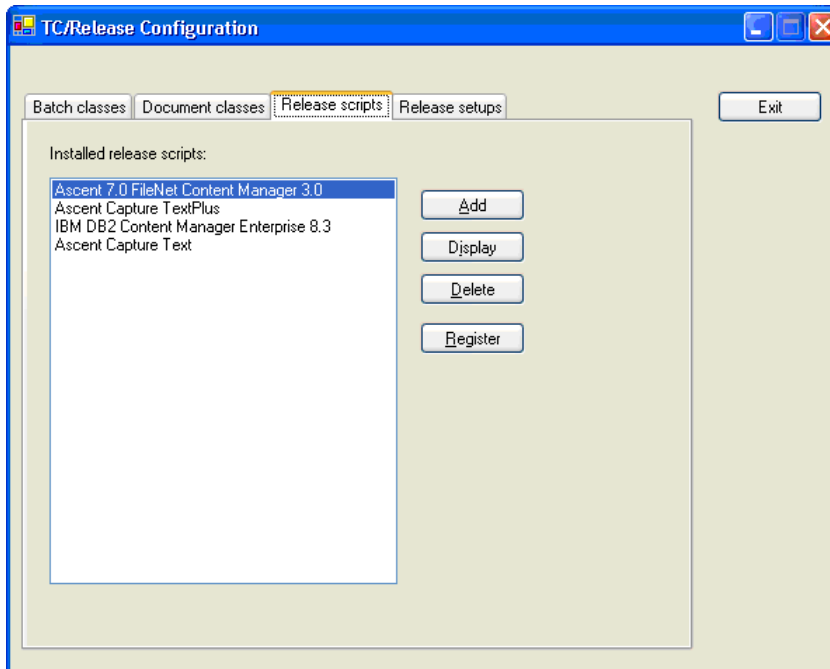


Figure 20. TCReleaseConfig Export Connectors configuration

Add: Lets you install a new export connector.

Display: Shows the details of the selected export connector and lets you configure encryption and date format options.

Delete: Uninstalls the selected export connector.

Register: Enables you to simply register an export connector as a COM object. Registering an export connector may be necessary if there are parallel instances of TC/LINK-RS and the connector has already been installed on another computer. In this case, it is only necessary to register it locally, no additional repository object is needed.

Furthermore, this button can be used for re-registering a connector after moving it to another folder.

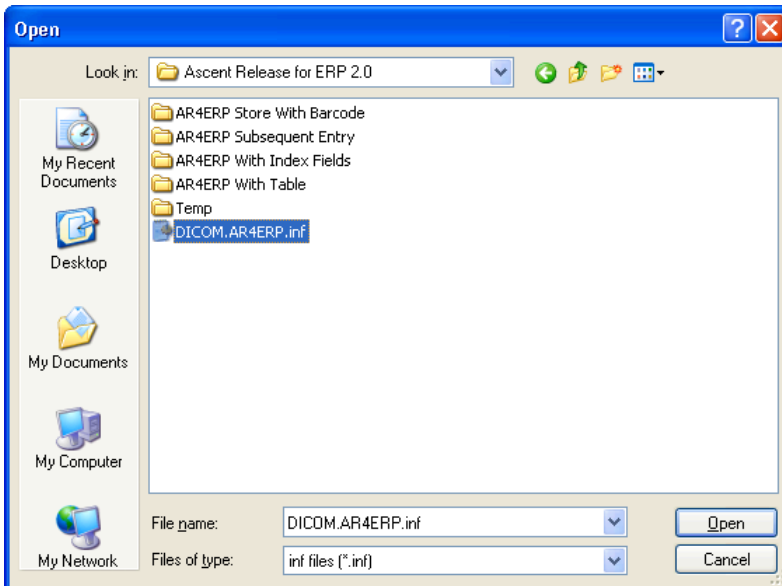


Figure 21. Open export connector INF file

When installing a new export connector (Add or Register), you must specify the INF file provided by the connector author. This file holds information about one or more export connectors. A list of export connectors defined in this file appears.

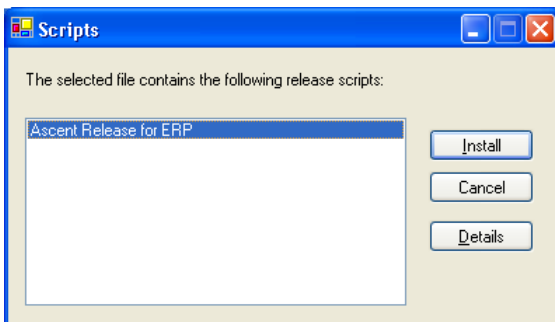


Figure 22. Select export connector from INF file

Click **Details** to view the details for a connector or click **Install** to install a connector.

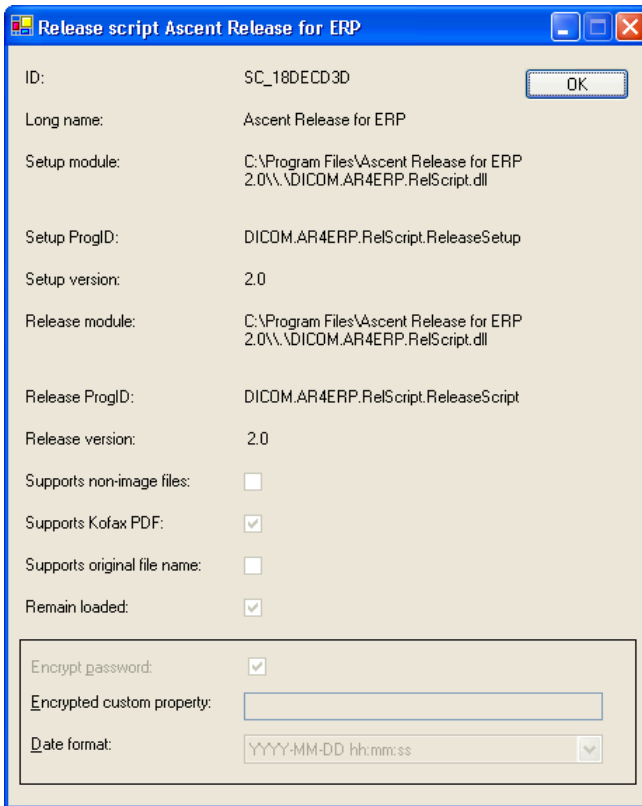


Figure 23. Export connector details page

The Export connector details page lists all parameters defined in the INF file, plus a few additional parameters at the bottom of the page.

Once the export connector has been installed, you can edit the following three options on the bottom of the details page:

These options deal with special export connector features. Refer to the *Export connector Integration documents* for detailed information.

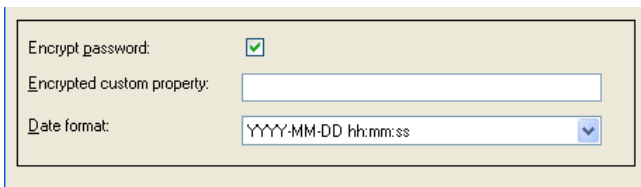


Figure 24. Encryption and date format options

Encrypt password: The credentials (user ID, password) for accessing the DMS are part of the release setup. When editing a release setup, the first dialog box asks for these credentials. Some export connectors provide the password in encrypted format. For all others, TCReleaseConfig can do the encryption. If this option is selected, all release setups using this export connector have the password stored in an encrypted format.

Encrypted custom property: The export connector for FileNet IS stores a password in a custom property field. This is a non-standard feature; other export connectors use the Password field for this purpose. To avoid storing the password as plain text, you can enter the name of the custom property field that shall be stored in an encrypted format.

Date format: Select between different formats of date/time strings. Some back-end systems require special date formats.

Release Setups

Release setups are the most important objects for configuration. The release setup defines which information is archived in the backend system, where and in which graphic format the fax image shall be stored.

It is possible to have a global configuration where all inbound or outbound faxes are handled in the same way. Alternatively, you can configure individual release setups for individual users.

This section explains the differences between both modes. The examples in the following sections are from a user-specific configuration.

Note Two new event types (Inbound Release, Outbound Release) have been implemented in TCOSS. These event types should be used, as they are the only ones that can have a global scope.

Global Scope

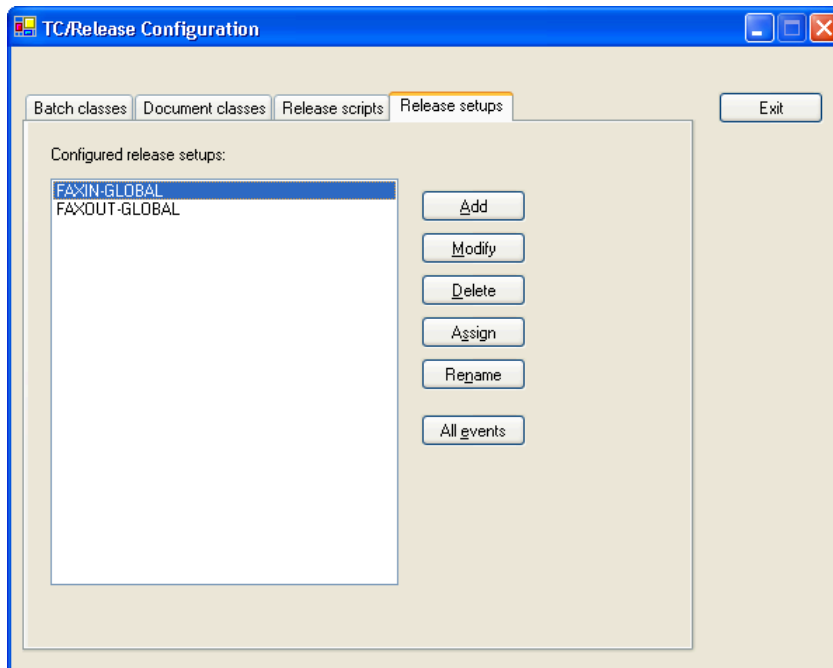


Figure 25. TCReleaseConfig Release Setups configuration: global scope

The above screenshot shows a simple global configuration: There are only two release setups, one for inbound faxes and the other for outbound faxes.

Both release setups affect faxes sent via channel group F (normalized originator or recipient of the send order is "F"). You need a TCROSS queue user for the channel group; this user has an inbound release event and an outbound release event:

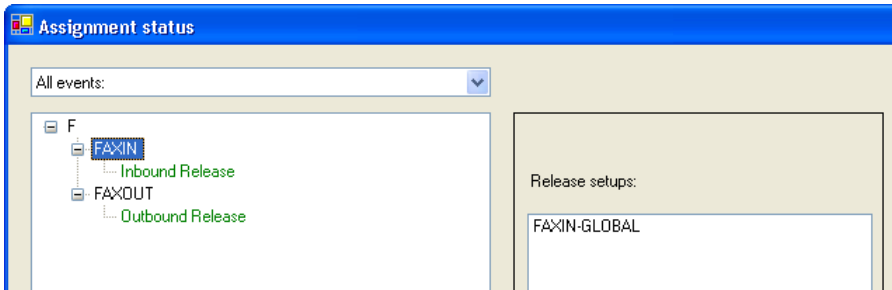


Figure 26. Events for release setups with global scope

Note For a detailed description of the Assignment Status window see below.

User-Specific Scope

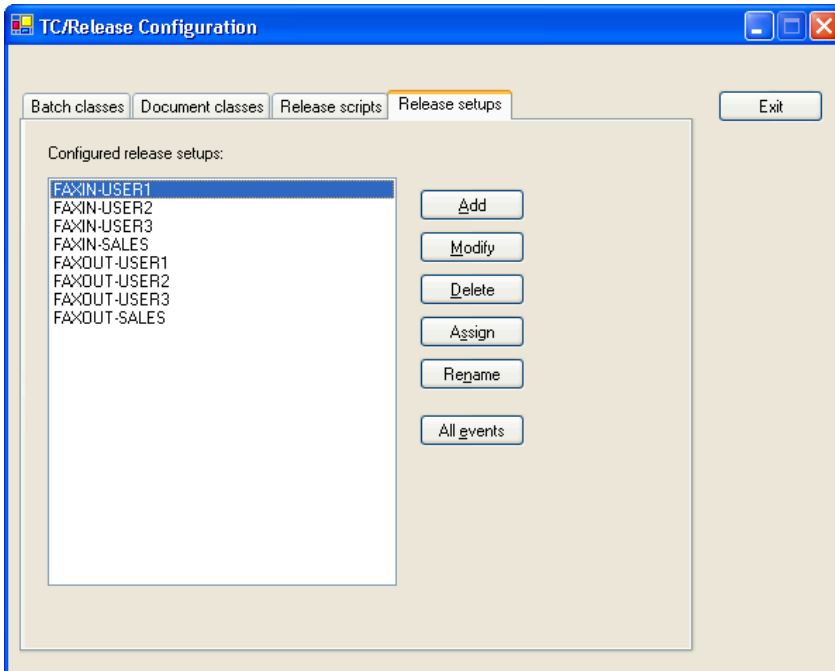


Figure 27. TCReleaseConfig Release Setup configuration: user-specific scope

In a user-specific configuration, every user can have dedicated release setups. It is also possible to assign one release setup to several users. For example, the FAXIN-SALES setup belongs to all users of

the sales department. Users or user groups can therefore archive their messages in different backend systems.

In this mode, you should not have release events for queue users, because they overrule the release events of individual users. The subsequent sections describe in detail how such a configuration is done.

Configured Release Setups

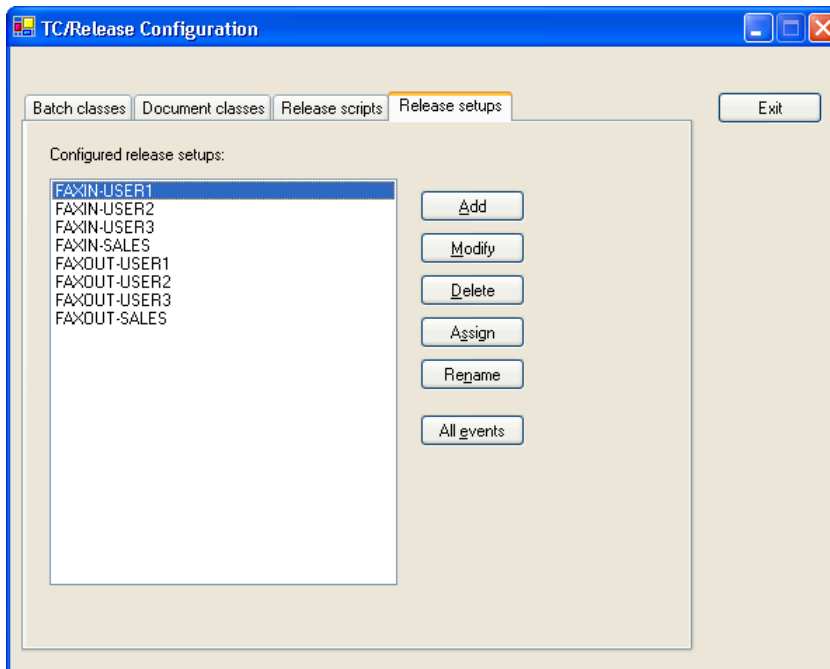


Figure 28. TCReleaseConfig Release Setup configuration

The Release Setups configuration page shows the list of defined release setups.

Add: Lets you add and edit a new release setup.

Modify: Lets you edit the details of the selected release setup.

Delete: Deletes the selected release setup.

Assign: Lets you assign the selected release setup to a user or a channel group.

Rename: Lets you rename the selected release setup without opening its own user interface.

All Events: Shows the events configured for the release setups and lets you add or modify events.

Add Release Setup

Click the **Add** button to create a new release setup.

Select a document class and an export connector, and click OK. The export connector configuration page is displayed.

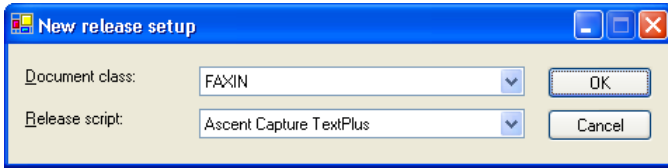


Figure 30. Add new release setup

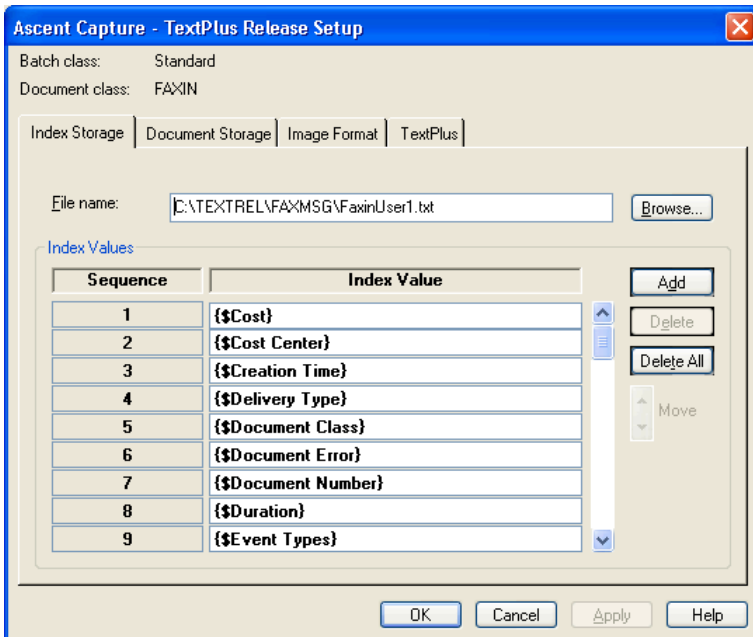
In the Release Setup configuration page, enter a name and fill in all parameters required by the export connector.

Modify Release Setup

Click the **Modify** button to open the Release Setup details page. This page shows the user interface of the export connector. Therefore, this part of the application has Kofax Capture look and feel.

The following figure shows the release setup GUI of the TextPlus sample export connector. This connector is freeware and can be obtained from the Kofax download web site:

<http://www.kofax.com/software/capture/export-connectors-freeware.php>



Assign Release Setup to Users

Click the **Assign** button to open the Assignments window.

The Assignments window displays the users of this release setup. You can edit the list of users.

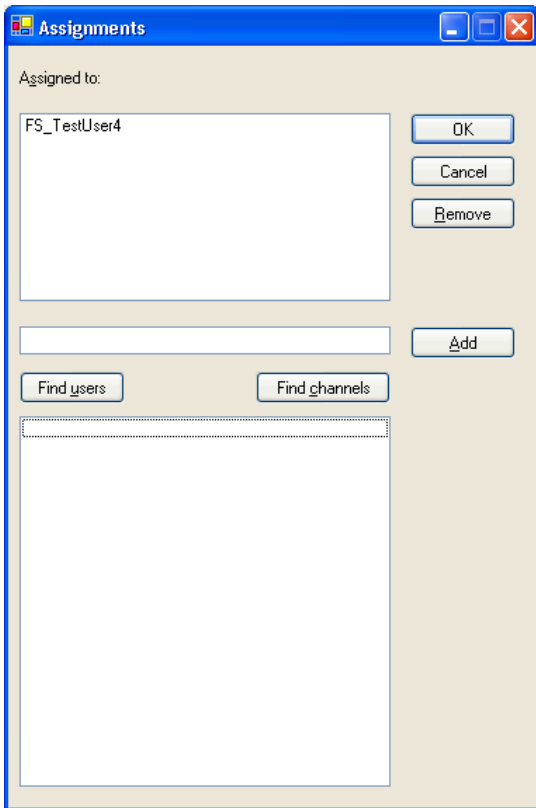


Figure 33. User assignments

In this example, the release setup (FAXIN-SALES) is already assigned to user FS_TestUser4. To add another user, you can either type in the user name or search for the user in the TCOSS user store.

Assigned to: This list contains all users for whom the release setup is configured. In a global configuration, the list will contain queue users (such as user F for the fax channel group F).

Remove: This button removes the selected names from the assignment list.

Add: If users are selected in the find results list, the selected users are added to the assignment list. Otherwise, the user name typed into the text box beside the button is appended to the assignment list.

Find users: You can also use wildcards when typing the user name, and click **Find Users** to find matching TCOSS users.

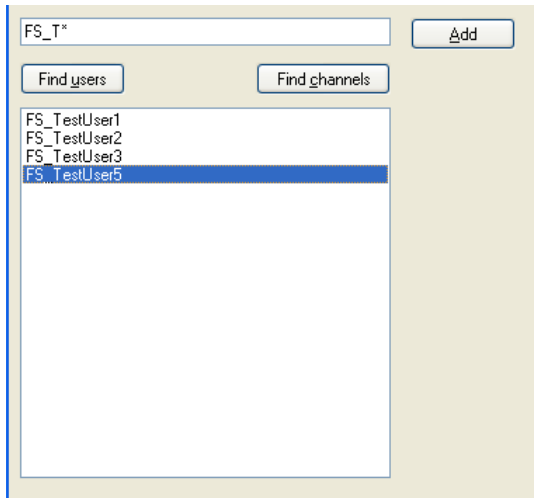


Figure 34. Find users

Find channels

: In a global configuration, use this button to find queue users that match the name in the textbox. The list box on the bottom of the screen shows the names of the search results. Select one or more users and click **Add** to add the selected names to the assignment list. In the above example, user FS_TestUser5 will be added to the assignment list for the FAXIN-SALES release setup.

Note If the application is not connected to TCOSS, the Find buttons are disabled.

Events for this Release Setup

Assigning a release setup to a user simply adds the user to the release setup's list of "owners". To redirect the user's inbound or outbound mail to TC/LINK-RS, events must be configured in the user profile.

In a standard installation, use "Inbound Release" events for archiving of incoming faxes and "Outbound Release" events for archiving of outbound faxes.

In a more sophisticated scenario, other event types, such as In or Del-Notif, can also be used but only for normal users (no global configuration).

The destination address of the event contains the internal name of the document class. One event can cause multiple release actions, if the user owns multiple release setups for the document class.

Click **OK** in the Assignments window. A new window displays the event status for this release setup.

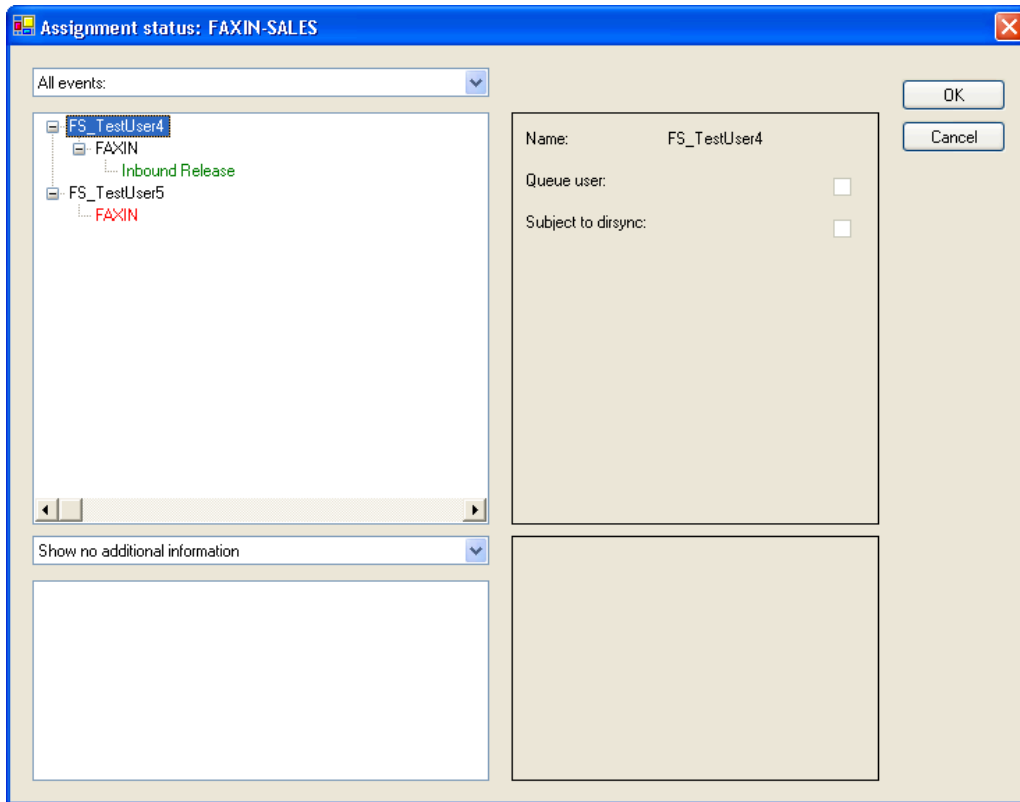


Figure 35. Assignment status

This window consists of two main areas:

1. The upper half shows the events configured for the owners of the selected release setup. Possible problems are highlighted (red).
2. The lower half can show additional information: Additional global release events configured for queue users (they overrule release events of individual users), or (optionally) all additional release events (queue users and normal users).

Events for the release setup

You can either view all events (default) or only problems.

The tree view in the upper left corner shows the user names from the assignment list. The list also contains users that have just been removed from the assignment list because they still may have active release events. Below the user nodes, you find the document class name and the individual events.

A text box right to the tree view shows more information about the selected item. For users and document classes, this information is read-only. For events, you can edit some details.

Users

If the user does not exist, the user name is displayed in red color, and the text box beside the tree view shows the error text "User not existing!"

A context menu item “Create Queue User” allows creating the user as a queue user (for a global configuration). The new queue user gets a default password “password1234”.

To create normal user profiles, use TCfW.

For existing users, you see whether this is a queue user and whether the user profile can be modified via Dirsync.

Document Classes

Below the user node you see the document class name of the release setup.

The document class name may be red if one of the following problems was found:

- The user is part of the assignments list and has no events for this document class.
- The user was removed from the assignments list, but still has events for this document class.

The box beside the tree view shows all release setups that are enabled for this user and document class.

Note The user may have multiple release setups for a document class, for example, to different backend systems. The event send order affects all these setups.

A context menu item “Create Event” allows creating a new event for this document class.

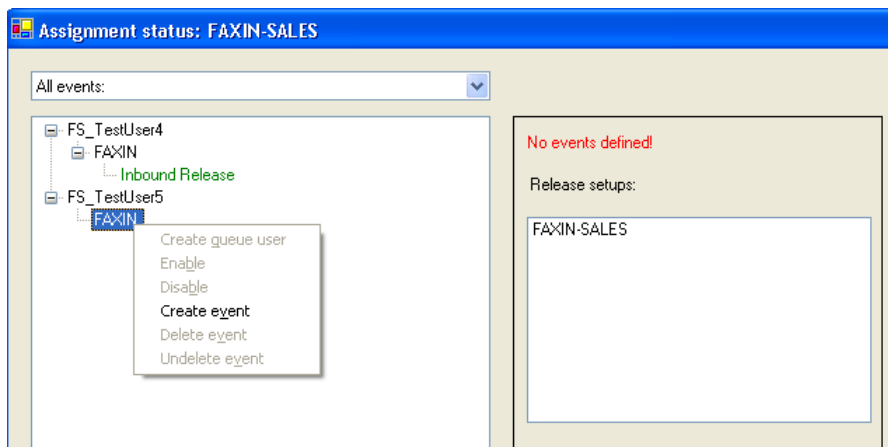


Figure 36: Assignment status: events for this release setup

Events

Below the document class node, you see the events that are actually defined in the user profile. Only events for this document class are displayed.

The color of the event node tells about the event status:

- Green: enabled
- Black: disabled
- Brown: marked for deletion.
- Red: enabled, but document class not existing

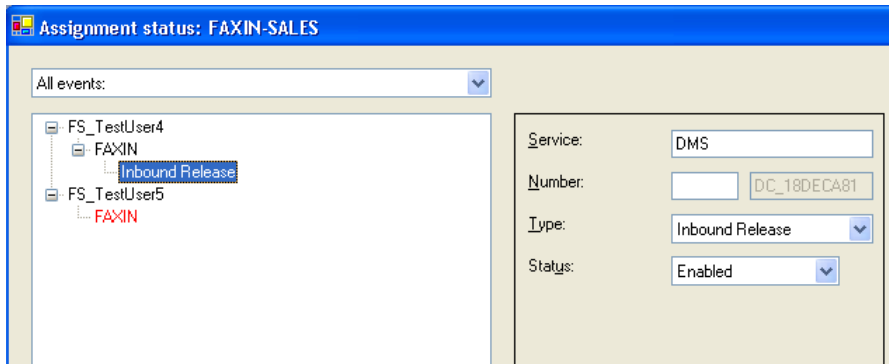


Figure 37. Assignment status: event definition

For an event, a box is displayed beside the tree view. It shows the following:

- **Service** and **Number**: The event's target address. The number contains the internal name of the document class which is automatically inserted when an event is created via the configuration tool, plus an optional prefix (for example, for addressing via the FREE service).
- **Type**: The event type can only be selected when creating a new event. You can select one of the following events.

Event	Description
Inbound Release	TCOSS generates this event when a message comes in from a fax channel or from a (specially configured) link instance.
Outbound Release	TCOSS generates this event when a message from the TCOSS user was successfully sent to a fax channel or (specially configured) link instance.
In	TCOSS generates this event when a message is put into the user's IN Box.
DelNotif	TCOSS generates this event when a delivery notification for a previously sent message exists.
Non-delNotif	TCOSS generates this message when a non-delivery notification to a previously sent message exists.
Sending Copy	TCOSS generates this event when a sending copy of a message sent has been created. A sending copy is a copy of the message TCOSS generates during sending.

- **Status**: Status whether the event is enabled, disabled or marked for deletion. You can change the status via the Status list or via the context menu of the event node. Inbound release events created by TCRReleaseConfig do not automatically terminate the send order. All other event types are configured for auto termination.

Displaying only problems

If you select "Events or assignments with problems:" in the upper list, the tree view shows only problems that were detected, that is, not existing users, missing events and events without assignments.

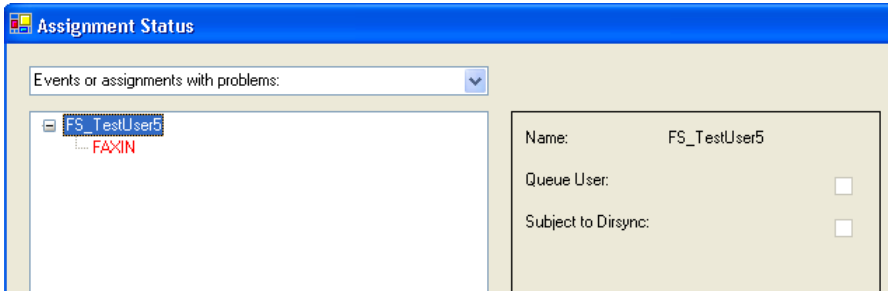


Figure 38. Events or assignments with problems

Additional information

If you select “Additional release events (queue users)” in the combo box between the two tree views, a list of additional release events to queue users is displayed below. Such events may exist if a global configuration was used before.

This is important information, as these events may overrule individual users’ events. For example, if user FS_TestUser4 receives a fax with normalized originator “F”, the inbound release event of queue user F is activated instead of the inbound release event of FS_TestUser4.

You can enable or disable events via a context menu item.

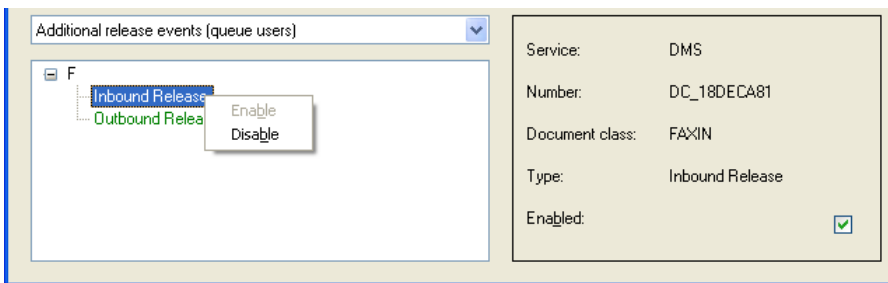


Figure 39. Disable global event

If you select “Additional release events (all users)”, all additional release events will be displayed, including those of normal users.

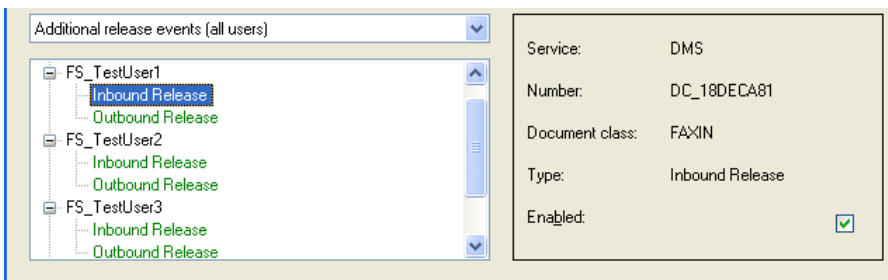


Figure 40. Additional events – all users

Click **OK**. Any changes made in this window are saved.

If you cancel or simply close the window, the changes will be cancelled.

Note Before writing changes to the user profile, TCReleaseConfig checks if the affected events and their positions have been changed in the meantime, such as by an administrator using TCfW, or by directory synchronization.

If such simultaneous changes occur, the events will not be stored in TCROSS and the tool shows an error message, such as:

- “User FSTestUser1 has been deleted by another application. Cannot save changes.”(if the user profile was deleted)
- “User FSTestUser1 has been changed by another application. Cannot save changes.”(if the user’s events were changed)

Rename Release Setup

If the export connector does not provide a name input field or if you forgot to enter a name, the name of a new release setup is “NewSetup”. To change the name, do the following:

1. Click the **Rename** button.

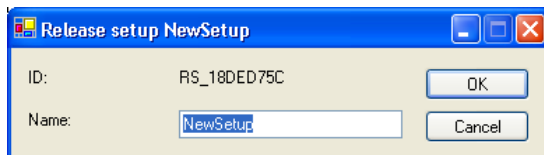


Figure 31. Rename release setup

2. Enter a new name.
3. Click **OK**.

The ID displayed in this dialog window is the filename of the repository object.

Import or Export Release Setup

For test purposes, a context menu of the release setup list allows importing or exporting release setups. Right-click the release setup and click **Import** or **Export** as needed.

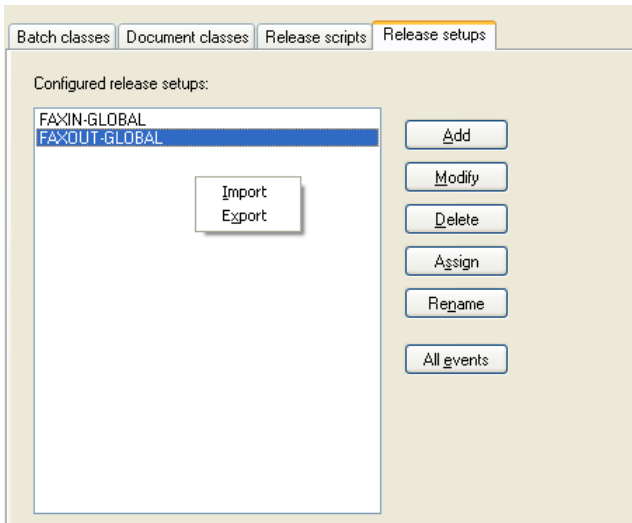


Figure 32. Context menu for release setup import and export

Note Only experienced users (such as QA department) shall import release setups, as special requirements must be met: the export connector must be installed and the batch fields and index fields used by the release setup must exist.

Show Events for All Release Setups

Click the **All Events** button beside the release setups list. The Assignment Status window opens that displays event information for all configured Release Setups.

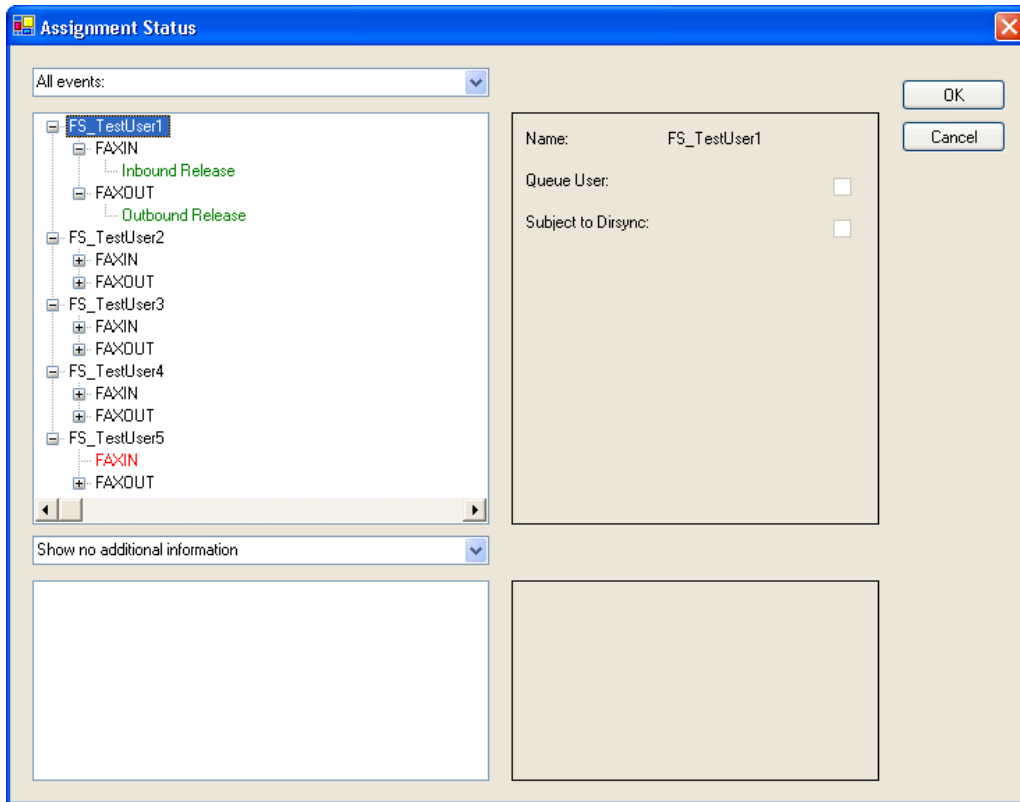


Figure 41. All events

The upper tree view displays all release setup owners (normal users and queue users), including not-existing users who are part of a release setup's assignments list.

A user can have events for multiple document classes.

You can create queue users, create, edit and delete events as described above.

The lower part of the window optionally shows all additional release events that cannot be matched to the configured release setups.

Deleting Objects

The configuration objects are organized hierarchically. For example:

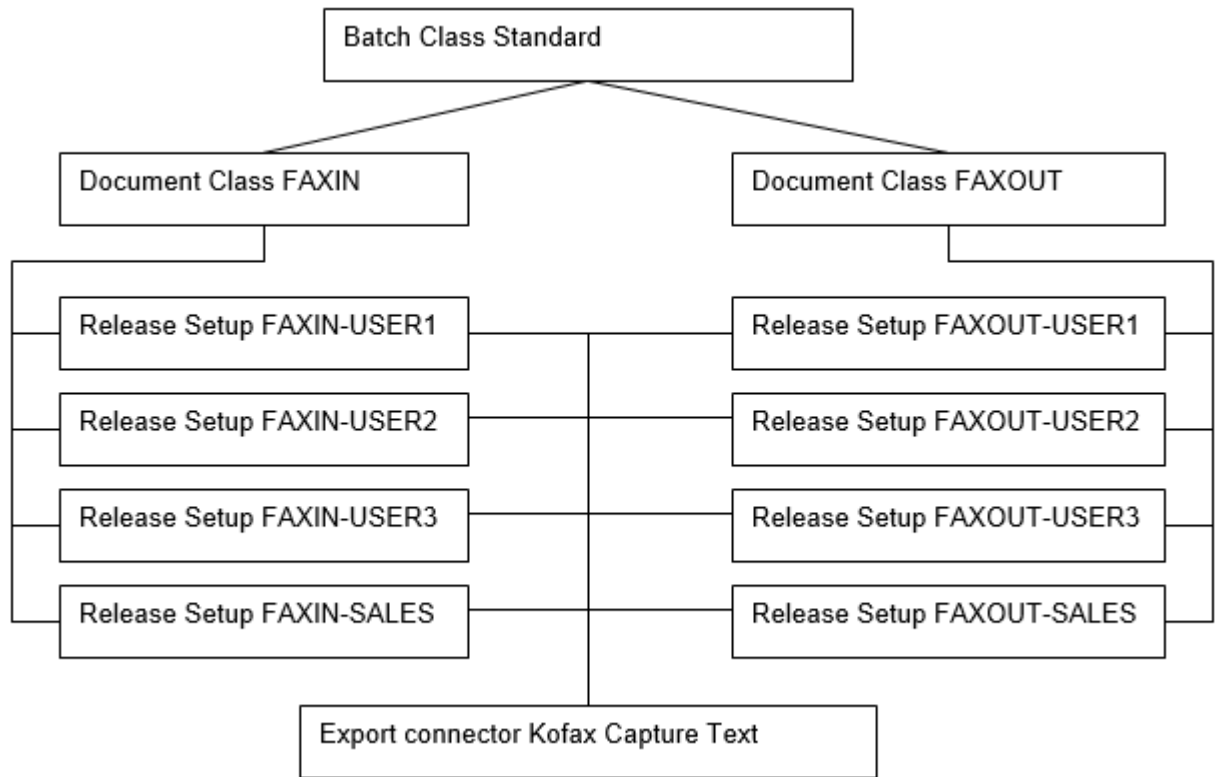


Figure 42. Hierarchy of configuration objects

- A batch class contains one or more document classes.
- A document class can have several release setups.
- An export connector can be used by several release setups.
- A release setup can be used by several users, who have corresponding events.

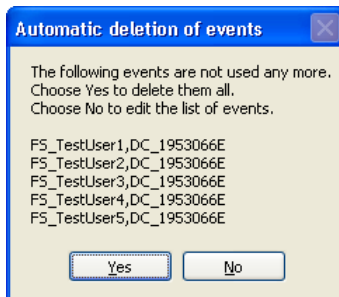
Deleting one object in the hierarchy has an influence on the other objects. The following table describes the actions that TCReleaseConfig takes when you delete an object:

Deleted Object	Subsequent actions done automatically
Release Setup	Remove all user assignments for this release setup. Show assignment window with events for the removed assignments, to allow deletion or disabling the events.
Export connector	Delete all release setups using this connector. Remove all user assignments for the deleted release setups. Show assignment window with events for the removed assignments.
Document Class	Delete all release setups for this document class. Remove all user assignments for the deleted release setups. Show assignment window with events for the removed assignments.

Deleted Object	Subsequent actions done automatically
Batch Class	Delete all document classes of this batch class. Delete all release setups for the deleted document classes. Remove all user assignments for the deleted release setups. Show assignment window with events for the removed assignments.

After deleting a batch class, document class, export connector or release setup, TCReleaseConfig deletes all associated assignments between users and release setups.

TCReleaseConfig detects which events are unused and offers to delete them automatically:



If you choose **Yes**, the events will be deleted.

If you choose **No**, the Assignment status window will be displayed and you can edit the events manually:

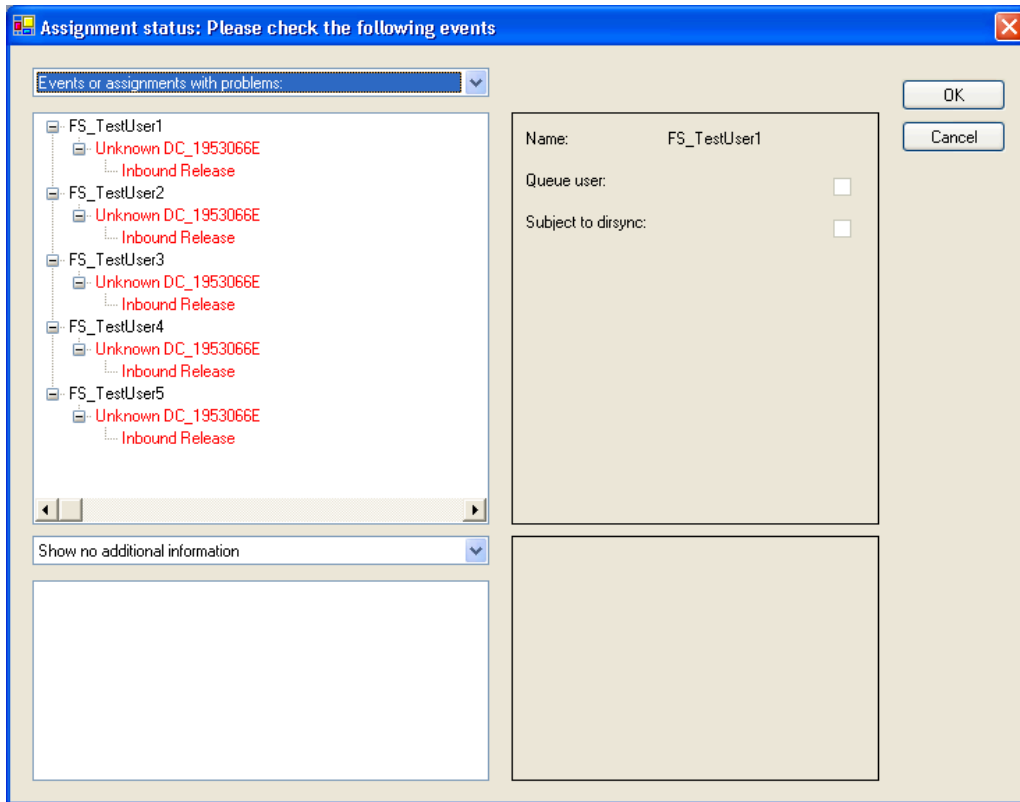


Figure 43. Assignment status after document class deletion

The above screen is the result of deleting a document class. All inbound release events still exist, but their destination address has an unknown document class. You should delete or disable these events.

Settings for Several Object Types

There are some settings (checkboxes in the configuration tool) that exist for several object types.

- The batch class and document class definition states whether an option is available for the document type.
- The export connector properties define if the third party export connector supports the option.
- The export connector provider designs the release setup GUI in a way that the supported options can be enabled or disabled.

The following sections describe in detail how these settings work together.

Support Non Image Files

The batch class can be defined as supporting non image files, that is, binary files.

Currently, this option is not supported by Kofax Communication Server and cannot be configured via TCReleaseConfig.

The export connector definition (INF file) states whether the connector supports non image files.

Use Original File Names

The batch class can be defined as providing original file names. This will become interesting for non image files, such as attached DOC files. For fax messages, this does not make sense. Therefore the option is currently disabled and cannot be configured via TCReleaseConfig.

The export connector definition (INF file) states whether the connector can provide original file names to the backend system.

Support OCR

The document class definition tells whether the document is a text message.

In the release setup GUI, you can configure whether text (if it is provided for the document) shall be saved separately on the backend system, and you can configure a folder where it shall be stored.

Support Kofax PDF

This option makes only sense for Kofax Capture, it is therefore disabled in the document class definition.

The export connector (INF file) tells whether the connector can handle PDF files.

In the release setup GUI, you can configure whether PDF files (if provided for the document) shall be saved on the backend system, and where they shall be stored.

Skip First Page

The document class definition tells whether the first page of the documents can be suppressed. This option is possible for fax messages, but it is not enabled by default.

The export connector (INF file) tells whether the connector supports this feature.

In the release setup GUI, you decide whether the first page shall be skipped or not.

Registry Values

TC/LINK-RS uses configuration values under registry key HKLM\Software\TOPCALL\\Options.

Registry value	Type	Default	Description
DirConfig	SZ	C:\TCOSS\TCLP \TCLINKRS\Config	Directory for (temporary) configuration files

Registry value	Type	Default	Description
DirConfigSamples	SZ	C:\TCOSS\TCLP \TCLINKRS \ConfigSamples	
DirPages	SZ	C:\TCOSS\TCLP\TMP \TCLINKRS	Directory for temporary TIFF files (1 per page)
DirTempFiles	SZ	C:\TCOSS\TCLP \TCLINKRS\COPIES	Directory for test documents created by TC/LINK-RS
Folder	SZ	TCLINKRS	Configuration folder on TCOSS server
InstallCapTools	DWORD	0	If 1, Setup installs the CAP libraries (used by some connectors)
NegTermOnError	DWORD	0	If 1, the TCOSS send order will be negatively terminated if a single release fails.
SaveFiles	DWORD	0	If 1, TC/LINK-RS stores all documents in the DirTempFiles folder.
TraceComObjects	DWORD	0	If 1, TCReleaseCtrl.DLL traces the creation and destruction of COM objects.
TracelevelTCRelease	DWORD	2	Function trace depths for TCReleaseCtrl.DLL. 0: no function trace 1: level 1 functions 2: level 1-2 functions 3: level 1-3 functions 20: maximum trace depth

Chapter 5

Quick Start Guides

The following sections list the main steps for installing and configuring export connectors. It is assumed that TC/LINK-RS is already installed.

Kofax Export Connector 8.3.0 R2 for Microsoft SharePoint

Verify that TC/LINK-RS setup has correctly set the registry value `HKLM\Software\Kofax Image Products\Ascent Capture\3.0\CurrentVersion` to a value required by export connector (usually "10.0").

Run `setup.exe` and follow the instructions to install the export connector. Use the default installation folder.

Verify that the installation folder for the export connector (by default, `C:\Program Files (x86)\Kofax\Capture\bin\Kofax.SharePoint.8`) contains the file `Kofax.ReleaseLib.Interop.dll`. If you installed the export connector to another location, please copy the file to that location.

Assign the export connector to a TCOSS user or to a fax channel group and the define events that route messages to TC/LINK-RS.

Kofax Export Connector 8.0.0 for Documentum Content Server

Verify that TC/LINK-RS setup has correctly set the registry value `HKLM\Software\Kofax Image Products\Ascent Capture\3.0\CurrentVersion` to a value required by export connector (usually "10.0").

Run `setup.exe` and follow the instructions to install the export connector. Use the default installation folder.

Assign the export connector to a TCOSS user or to a fax channel group and the define events that route messages to TC/LINK-RS.

Kofax Export Connector 7.5 for OpenText eDocs DM

Verify that TC/LINK-RS setup has correctly set the registry value `HKLM\Software\Kofax Image Products\Ascent Capture\3.0\CurrentVersion` to a value required by export connector (usually "10.0").

Run `setup.exe` and follow the instructions to install the export connector. Use the default installation folder.

Assign the export connector to a TCOSS user or to a fax channel group and the define events that route messages to TC/LINK-RS.

Kofax Export Connector 7.0 for IBM DB2 Content Manager Enterprise

Verify that TC/LINK-RS setup has correctly set the registry value `HKLM\Software\Kofax Image Products\Ascent Capture\3.0\CurrentVersion` to a value required by export connector (usually "10.0").

Run `setup.exe` and follow the instructions to install the export connector. Use the default installation folder.

Assign the export connector to a TCOSS user or to a fax channel group and the define events that route messages to TC/LINK-RS.

Kofax Export Connector 8.2.0 for IBM FileNet Content Manager

Verify that TC/LINK-RS setup has correctly set the registry value `HKLM\Software\Kofax Image Products\Ascent Capture\3.0\CurrentVersion` to a value required by export connector (usually "10.0").

Run `setup.exe` and follow the instructions to install the export connector. Use the default installation folder.

Verify that the installation folder for the export connector (by default, `C:\Program Files (x86)\Kofax\Capture\bin\Kofax.FileNet.8.2`) contains the file `Kofax.ReleaseLib.Interop.dll`. If you installed the export connector to another location, please copy the file to that location.

Assign the export connector to a TCOSS user or to a fax channel group and the define events that route messages to TC/LINK-RS.

Kofax Export Connector 1.1.0 R2 for TotalAgility

Verify that TC/LINK-RS setup has correctly set the registry value `HKLM\Software\Kofax Image Products\Ascent Capture\3.0\CurrentVersion` to a value required by export connector (usually "10.0").

Run `setup.exe` and follow the instructions to install the export connector. Use the default installation folder.

Verify that the installation folder for the export connector (by default, `C:\Program Files (x86)\Kofax\Capture\bin\KEC-TotalAgility`) contains the file `Kofax.ReleaseLib.Interop.dll`. If you installed the export connector to another location, please copy the file to that location.

Assign the export connector to a TCOSS user or to a fax channel group and the define events that route messages to TC/LINK-RS.

Kofax Export Connector 1.0.0 for CMIS

Verify that TC/LINK-RS setup has correctly set the registry value `HKLM\Software\Kofax Image Products\Ascent Capture\3.0\CurrentVersion` to a value required by export connector (usually "10.0").

Verify that the file `RegAscSc.exe` exists in `C:\Program Files (x86)\Ascent\Bin`.

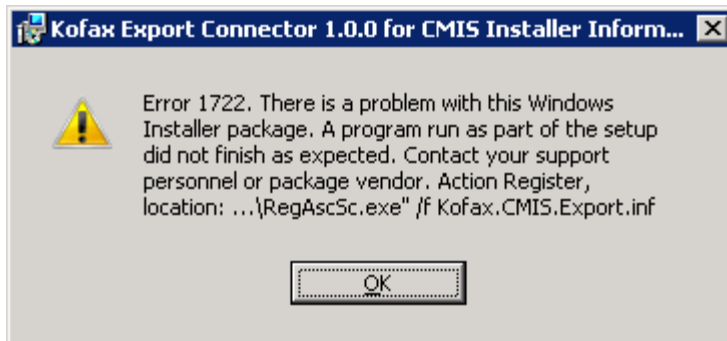
Run `setup.exe` and follow the instructions to install the export connector. Use the default installation folder.

Verify that the installation folder for the export connector (by default, `C:\Program Files (x86)\Kofax\Capture\bin\Kofax.CMIS.1`) contains the file `Kofax.ReleaseLib.Interop.dll`. If you installed the export connector to another location, please copy the file to that location.

Assign the export connector to a TCOSS user or to a fax channel group and the define events that route messages to TC/LINK-RS.

Error Installing Export Connector

If you encounter the following error during the installation of the export connector



Rerun TC/LINK-RS setup. It creates a dummy file `RegAscSc.exe` in the folder `C:\Program Files (x86)\Ascent\Bin`. This file is required to install the export connector.

Document Index Fields and SharePoint Integration

If you specify document index fields, such as Current Time or Remote ID, on the Document Settings tab, the document cannot be released to SharePoint.

Chapter 6

Restrictions

This section describes the restrictions of TC/LINK-RS.

No Parallel Installation of Kofax Capture

It is currently not possible to have Kofax Capture and TC/LINK-RS installed on the same system.

Kofax PDF Format Not Supported

This image type is created by Kofax Capture software and is therefore only available in a full Kofax Capture environment. With TC/LINK-RS, it is not supported.

Adobe PDF Format Not Supported

This image type requires additional software and is therefore not supported.

No Real OCR

When configured for "OCR text release", TC/LINK-RS releases the message text. No real OCR is done (such as for fax images).

Non-Image Files Not Supported

With the current version of TC/LINK-RS, binary files cannot be stored in the backend DMS.

Messages Without Image Not Supported

If the release setup defines that image files shall be released to the DMS backend system, messages without image content will be discarded.

TC/LINK-RS is able to convert all text and TCOSS image blocks to image files.

If TC/LINK-RS must process attachments with alternative image contents, such as from a link, make sure that registry value `General\FmtFileAttachment` is set to "IB".

Nevertheless, empty messages or messages with pure binary attachments (no image alternative) cannot be converted to image and will therefore lead to an error during the release process.

Using Release Events for Link Queues

For a global configuration, inbound and outbound release events can be assigned to link queues.

If an outbound release event is defined for a link queue, all messages sent directly to this queue will trigger an outbound release event. This does not include IN-events, because an event send order never triggers another event.

With default configuration, TCLINK does not mark send orders as inbound. Messages received via a link queue will therefore not cause an inbound release event.

To enable inbound release events for messages posted to TCOSS via a link queue, set registry value `TOPCALL\MarkAsInbound` of the receiving link instance to 1. This enables inbound release events for messages from mail system users who do not have TCOSS shadow users. Please note that this setting makes only sense if there is an inbound release event defined for the link queue.

A single send order can only trigger one type of release event (either inbound or outbound). If, for instance, a mail system user posts a fax via TCLINK and there are inbound and outbound release events defined for the link queue and the fax channel group, TCOSS generates only an inbound release event for the link queue.

Use TIF Queue for Events

Only messages sent via the TIF queue are processed correctly.

Dedicated Release Setups for Inbound and Outbound Messages

When using different release setups for different event types (such as inbound and outbound release), you must define dedicated document classes for them (like FAXIN and FAXOUT in the examples).

Reason: TC/LINK-RS processes all release setups defined for the document class that is part of the event address. With a single document class and two release setups (inbound and outbound), every event would process both release setups, so that the message would be archived twice.

Service Restrictions for Events Must Be Configured via TCFW

TCReleaseConfig provides only the most basic configuration options for events. More complex settings like service restrictions can be configured via TCFW.

Note Service restrictions are also supported for the new inbound and outbound release events.

Importing XML Files

When importing a repository object from an exported XML file, the resulting object gets a new internal name (ID). The sample batch class and document class files installed during setup were created via Export. Thus, importing the sample document class XML file twice creates two document classes with different IDs.

When importing a repository object from an XML file in the local Config folder (or from a copy of it), the internal name (ID) stays the same. Importing the same file twice results in two repository objects with the same ID.

Reason: Export removes the ID information from the exported file. When importing an XML file without an ID, a new ID is created.

Required TC/LINK-RS Configuration Settings

For correct operation, the following registry values must be set correctly. Please use the values set by TC/LINK-RS setup and do not change these settings to any non-supported values.

Registry value	Allowed values	Description
TOPCALL\ IncludeCover	1	To include the fax coversheet
General\ CompatibilityNoCover	0	To include the fax coversheet
TOPCALL\ DelNfTxtToMail	0	Archived outbound messages shall not contain delivery notification text
TOPCALL\ DelNfOrigToMail	1 or 2 (default)	Archived outbound messages shall contain the original message (2) or the sending copy (1)
TOPCALL\ DelNfOnlyText	0	Archive the complete outbound message, not only message text
General\ LinkGroup	ALL	For correct handling of outbound release events and notification events.
General\ ConvertToTif	AlwaysComplete	To include the fax coversheet
General\ FmtFileAttachment	BI (default) or IB	If TC/LINK-RS must process attachments with alternative image content, such as from a link, set this value to IB
Setup\ QueueFormats	Must contain a TIF queue, such as 4	TC/LINK-RS must poll a TIF queue
Setup\ServiceDMS\ Prefix	Must be the TIF queue, such as: TCLRSQ4:	Only messages sent via the TIF queue are processed correctly

Chapter 7

Setup Checklist

TCOSS Server CPU number	
TCOSS version	
TC/LINK-RS license	Key: Expire Date: Registrations:
TCOSS Server Name	
Link Type to TCOSS Server, transport type PRC or Native	
Secondary TCOSS Server Name (for tandem servers only)	
Link Type to secondary TCOSS Server (for tandem servers only)	
TCOSS Link User Name	
TCOSS Link User Domain	
TCOSS Link User Password	
Configuration folder on TCOSS server	
Logon parameters for DMS backend (depend on export connector)	

Chapter 8

Glossary

- **Kofax Capture Batch:** A batch consists of a set of documents which should be processed
- **Kofax Capture Batch Class:** A batch class defines a set of allowed document classes
- **Kofax Capture Batch Fields:** The batch level fields are generic information fields, which contain document independent data.
- **Kofax Capture Document Class:** A document class defines a set of allowed forms, such as “Invoices”, but can have different form layouts, that triggers the same workflow
- **Kofax Capture Document Index Fields:** The document index fields are the attributes and values, which are first extracted from the images and secondly can be used in the “Release” of the document, that is, data, which can be written into the target system.
- **Kofax Export Connector:** In Kofax Capture, an export connector (formerly called Release Script) is the process, which puts the extracted data into the target system. In fact it is no real script, but a COM DLL, which gets called by Kofax Capture.
- **DMS, Backend System, Target System:** This is the external system, to which the out of the forms extracted data is sent, such as SAP, Documentum, Oracle, and more.
- **XML:** eXtended Markup Language. For more information refer to the TC/LINK-XML Manual.