

CoexLinks Fidelity 3.70

User Manual

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Overview

This chapter will discuss what CoexLinks is, what business problems it is designed to solve, and how it goes about solving them.

Description

CoexLinks is a specialized software extension that runs on the IBM Domino server (including versions when this was known as the IBM Lotus Domino server) using IBM's "extension manager" and "server add-in" technology to allow interception and modification of mail whether it is added to the mail system on that server or simply routed through the server. No scripts or agents are required. There are two choices for the core server software, CoexLinks Classic and CoexLinks Fidelity. This manual is for the CoexLinks Fidelity software. There is a matching manual for CoexLinks Classic. The purpose of each is outlined below so you can decide which is appropriate for you use.

In addition, CoexLinks includes an optional client component, CoexLinks Clipper, which is described in each manual since it may be used with either.

Purpose

CoexLinks was developed to address the need for coexistence between IBM Notes/Domino and non-Notes mail systems, especially where IBM Notes doclinks are sent to any external mail system. CoexLinks works by intercepting mail routed through the Domino server and converting any doclinks in the body of the mail to either URL links or NDL file attachments. In CoexLinks Fidelity 3.5, functionality was added to render all emails to high quality MIME to replace the rendering done by the Domino SMTP process or Notes client. In addition, a Message Store was added to allow storage and secure access to encrypted emails and emails with action hotspots, buttons, stored forms or other Notes features which do not have an equivalent outside the Notes client.

Two versions of the software are distributed and use the same license, so a customer may choose to move from one to the other at any time. The first which just handles the doclink conversion, is now referred to as CoexLinks Classic and has been a popular and widely used extension under the name CoexLinks Fidelity since 2003. The second is known as CoexLinks Fidelity and was introduced in 2014 as a full replacement which offers conversion of rich text emails to high fidelity MIME in addition to the functionality offered in CoexLinks Classic. Also in CoexLinks Fidelity is a new Message Store which allows messages with

content that does not translate to the web to be stored in a database and held for access via doclink.

Detection & Optimization

To ensure the lowest possible impact to your Domino server and mail infrastructure, CoexLinks Fidelity detects messages that do not need to be processed or have been processed on an earlier server, and passes them on undisturbed. Filtering of messages is configurable and may be based on the intended recipients and whether the message has been converted to MIME previously. Most mail that passes the filter will require some processing, though the level of processing depends on factors such as the presence of doclinks in the text, the complexity of the text, whether there are features in the email which require use of the Message Store and whether the email has a stored form. In most instances, unless successive levels of processing are intended, messages routed through additional Domino servers with CoexLinks Fidelity will require no additional processing. Using this techniques, CoexLinks Fidelity is able to maintain a very low profile and work within your existing mail architecture.

Security

CoexLinks Fidelity works completely within the IBM Domino security model, running with the privileges and security level of the Domino server. This ensures that the doclink and MIME conversion can be made on all e-mails successfully. Parameters are available to allow customized disclaimers to preface select modified e-mail to let the recipient know the e-mail was modified and how to handle the NDL file attachments or URL links created.

Email stored in the Message Store is controlled by document level security based on the intended recipients of the message. This allows a secure way for multiple recipients to access the stored email, while preventing others from seeing the contents. Encrypted messages will also be stored in the Message Store where the recipients can open it securely.

Installation

This chapter will discuss exactly how to install and configure CoexLinks Fidelity to run on your Domino server. It includes examples of the most common configuration entries for your NOTES.INI file. Additional information on configuration options can be found in Chapter 3 – Configuration Options. Information on monitoring the activity of CoexLinks Fidelity, including debugging and tracing options, can be found in Chapter 4 – Monitoring and Debugging.

Preparing for Installation

In order to install and configure CoexLinks Fidelity 3.62, you will need both the software and the software license. The CoexLinks Fidelity software is available from the Genii Software website from the CoexLinks Fidelity Download page at <http://www.GeniiSoft.com/showcase.nsf/CoexDownloads>, while the CoexLinks Fidelity license, whether an evaluation license or the production license, must be obtained from Genii Software or a reseller. Be sure that you have the appropriate software for your Domino server's operating system and Domino release.

1. Stop the Domino server

You cannot modify the Notes.INI information on a Domino server without first shutting down the server or stopping the Domino service. The same rule applies for upgrades to CoexLinks Fidelity.

You will need to edit your Notes.INI file to add and modify some options. Open the Notes.INI file and proceed to the next step.

2. Copy the software and license into appropriate directories

CoexLinks Fidelity

The CoexLinks Fidelity software consists of two files, the extension manager library and the server addin, though the names vary by operating platform. Note that even on 64-bit Windows systems, the 32-bit version should be used if 32-bit Domino is used.

Linux 32-bit: **libcoexlinks32.so** and **cxmsgproc32**

Windows 32-bit: **nCoexLinks32.dll** and **nCXMsgproc32.exe**

Windows 64-bit: **nCoexLinks64.dll** and **nCXMsgproc64.exe**

The two software files go into the *program* directory where the Domino server software resides. Copy the license file, named **coexlinks.lic** for all operating systems, into the Domino *data* directory.

You will need to edit your Notes.INI file to add and modify some options. Open the Notes.INI file and proceed to the next step. Steps for modifying the Notes.INI information on different server platforms can be found in the appropriate Domino server documentation.

3. Modify “ServerTasks=” and “extmgr_addins=” settings

- a) Search the Notes.INI file for the **ServerTasks=** setting. Add a comma and then CoexLinks Fidelity server addin. For example, if it was:

ServerTasks=Replica,Router,Update,AMgr,HTTP

you would change it to the following (for 32-bit Domino):

ServerTasks=Replica,Router,Update,AMgr,HTTP,CXMsgProc32

or the following (for 64-bit Domino) :

ServerTasks=Replica,Router,Update,AMgr,HTTP,CXMsgProc64

Note about case sensitivity: Windows is case insensitive while Linux is case sensitive. Therefore, on Linux, all extension manager and addin references are converted to lowercase. Thus, even though the Linux server addin is named “cxmsgproc32”, the command “tell CXMsgProc32 q” will work. Similarly, even though the Windows server addin is named “nCXMsgproc32.exe” the command “tell cxmsgproc32 q” will work.

- b) Search the Notes.INI file for the **extmgr_addins=** setting. If it does not exist, add it at the end of the Notes.INI file, but *always make sure there is a blank line after the last entry in the Notes.INI file*. Without this blank line, the final entry may be ignored.

For CoexLinks Fidelity for 32-bit Domino (Linux or Windows), the line should read:

extmgr_addins=CoexLinks32

For CoexLinks Fidelity for 64-bit Domino (Windows), the line should read:

extmgr_addins=CoexLinks64

You may find there is already an **extmgr_addins=** parameter, as other custom add-ins also use this technology. In this case, simply add **CoexLinks32** or **CoexLinks64** (as appropriate) to the parameter as a comma delimited list, so that

extmgr_addins=app1,app2

becomes

extmgr_addins=app1,app2,CoexLinks32

There can be any number of applications included in this list. While it is not required that **CoexLinks32** or **CoexLinks64** be last, it is generally recommended.

4. Add additional CoexLinks parameters

Directly below the **extmgr_addins=** parameter, add the additional CoexLinks Fidelity parameters to control your CoexLinks Fidelity configuration. The only required parameter is the **COEXDocLinkType=** parameter, which determines the form the converted doclinks will take.

The most common value is:

COEXDocLinkType=8

which will create Notes URL links.

An alternative value used by some companies where email is destined for Outlook is:

COEXDocLinkType=2

which will create NDL file attachments to replace the doclinks. See Appendix A for details on the NDL file format.

See Chapter 2 for additional options.

The following set of parameters, modified slightly for wording, is often included:

COEXDocLinkType=4
COEXPrependDocLink=1
COEXPrependDocLinkText1=Follow doclinks to access in Notes client.
COEXPrependDocLinkText2=*****

This will provide a preface to each modified message describing how to use the new links. It is recommended that a message be included when first testing CoexLinks Fidelity to easily identify messages modified by CoexLinks Fidelity.

Other parameters are used to control access to the Message Store, and to configure appropriate filtering and processing of emails rendered to MIME. Those will be discussed below

5. Restart the Domino server

When you have finished making changes to the Notes.INI information on the Domino server, and made sure they are saved, you can safely restart the Domino server or Domino service. If the CoexLinks Fidelity software is properly loaded, you will see a few messages along the lines of:

```
07/04/2014 09:00:32 AM CoexLinks Fidelity 3.62: Copyright (c) Genii Software Ltd., 2002-2014 -  
All Rights Reserved
```

```
07/04/2014 09:00:32 AM CoexLinks Fidelity Evaluation license (expires 08/15/2014 MM/DD/YYYY)  
07/04/2014 09:00:32 AM CoexLinks Fidelity V3.62, By lic.#5206, Evaluation License - Development  
Use ONLY!
```

These messages indicate that CoexLinks Fidelity has been loaded with an evaluation license. The production license will only contain the first of these lines:

```
07/04/2014 09:03:01 AM CoexLinks Fidelity 3.62: Copyright (c) Genii Software Ltd., 2002-2014 -  
All Rights Reserved
```


Classic Configuration Options

This chapter will list configuration options which are common between CoexLinks Classic and CoexLinks Fidelity. For additional configuration options specific to CoexLinks Fidelity, see Chapter 4. For additional configuration options specific to monitoring and debugging options, see Chapter 5.

COEXEnabled

This parameter does not usually appear, as it defaults to the software being enabled. The primary value for this is that it can be changed and take effect without having to bring down the server. Issuing a “set config COEXEnabled=0” at the server console or through the admin client will cause CoexLinks Fidelity to stop and allow messages to continue to route without being processed. Issuing another “set config COEXEnabled=1” will enable processing again, although you may need to also issue “load CXMsgProc32” or “load CXMsgProc64” to restart the server admin. Disabling processing using COEXDocLinkType=0 is no longer recommended.

COEXEnabled=0 (disabled - all processing skipped)
 COEXEnabled=1 (enabled - default value if parameter not included)

COEXiNotesRendering [Held for Version 3.7]

When an email in Notes rich text format is viewed via iNotes, the rendering is usually handled by the Domino server, but like other rendering, it is not always high enough fidelity and information can be lost or garbled. If the COEXiNotesRendering is set to 1, the CoexLinks Fidelity engine will render email.

COEXiNotesRendering=0 (disabled - default if parameter is not included)
 COEXiNotesRendering=1 (rich text messages opened in iNotes will be rendered)

COEXOutboundRendering

When an email in Notes rich text format is sent outside of the Notes/Domino environment to an external address, the rendering into MIME is usually handled by the Notes client or Domino server, depending on the settings. The default behavior of CoexLinks Fidelity is to take over this rendering, providing high fidelity and data retention for emails destined for external addresses. If the COEXOutboundRendering is set to 0, the CoexLinks Fidelity engine will render email to MIME, although it will continue to handle the doclinks. Effectively, this reverts CoexLinks Fidelity to CoexLinks Classic.

COEXOutboundRendering=0 (disabled - outbound email will not be rendered to MIME)
 COEXOutboundRendering=1 (enabled - default if parameter is not included)

COEXInboundRendering [Held for Version 3.7]

When a MIME email is viewed through the Notes client, the inbound conversion from MIME to Notes rich text format is usually done by the Notes client, but like other rendering, it is not always high enough fidelity and information can be lost or garbled. If the COEXInboundRendering is set to 1, the CoexLinks Fidelity engine will render MIME email to Notes rich text.

COEXInboundRendering=0 (default if parameter is not included)
COEXInboundRendering=1 (MIME messages opened in Notes will be rendered)

COEXInboundOnReplicate [Held for Version 3.7]

When a MIME email is replicated to the Notes client, it usually stays in MIME, but if the COEXInboundOnReplicate is set to 1, all replicated MIME emails will be converted to rich text by the CoexLinks Fidelity engine.

COEXInboundOnReplicate=0 (default if parameter is not included)
COEXInboundOnReplicate=1 (MIME messages will be rendered when replicated)

COEXDebug

Determines the debugging level. Normally, this option should be left out, which implies no debugging. Debugging information is to the log.nsf. As debugging can inhibit performance, it should only be used when resolving a specific issue.

COEXDebug=0 (all debugging disabled – same as leaving option out)
COEXDebug=1 (minimal debugging enabled)
COEXDebug=2 (medium debugging enabled)
COEXDebug=3 (full debugging enabled)
COEXDebug=4 (intrusive debugging enabled – system may not run well)

COEXDirectory

Full filepath of the directory where the license file may be found, and also where temporary files may be stored. This parameter is not frequently used because CoexLinks Fidelity no longer creates temporary files as part of its normal operation, but it is still possible to use it for the license file location.

COEXDirectory=filepath (full filepath of directory where license file resides)

COEXLogDB

Deprecated name for Message Store database. Use COEXMessageStoreDB instead. Ignored if COEXMessageStoreDB is found.

COEXLogDB=filepath (filepath of logging database – no logging if blank)

COEXDocLinkLimit

Set if there is a limit to how many doclinks may be converted. Messages beyond this limit will not have any doclinks converted. If set to 0, or if the option is not present, any number of doclinks founds will be converted. Most commonly used to prevent issues with mail systems which object to large number of attachments when converting to NDL file attachments (COEXDocLinkType of 2 or 18).

COEXDocLinkLimit=0 (no limit on doclinks – same as leaving option out)
COEXDocLinkLimit=n (n is limit above which message will not be handled)

COEXDocLinkPreserve

Determines whether the doclink should be left in the message along with the converted form. This is useful if the message may be opened by a Notes client or by a non-Notes e-mail client.

COEXDocLinkPreserve=0 (doclinks will be replaced – same as leaving option out)
COEXDocLinkPreserve=1 (doclinks will be left in place and converted form added)

COEXFilterMode

Filter by recipients which messages will be processed.

COEXFilterMode=0 (no filtering – same as leaving the parameter out)
COEXFilterMode=1 (explicit Internet addresses using common TLDs)
COEXFilterMode=2 (implicit Internet addresses using string matching)
COEXFilterMode=3 (explicit address plus resolved groups)
COEXFilterMode=4 (only process mail to names in COEXFilterNames)
COEXFilterMode=5 (do not process mail to names in COEXFilterNames)
COEXFilterMode=6 (only process mail to domains in COEXFilterDomains)
COEXFilterMode=7 (do not process mail to domains in COEXFilterDomains)

COEXFilterNames

Based on COEXFilterMode of 4 or 5, only process email to names specified here (comma separated), or exclude processing for names specified here.

COEXFilterNames=addresses (addresses to process or exclude)

COEXFilterDomains

Based on COEXFilterMode of 6 or 7, only process email to domains specified here (comma separated), or exclude processing for domains specified here.

COEXFilterDomains=domains (Internet domains to process or exclude)

COEXMode

Determines whether all emails should be handled by the server add-in. If the Message Store is enabled, this is automatically on and cannot be overridden, but if

the Message Store is not enabled, emails will be handled by the extension manager unless this is set to 1.

COEXMode=0 (emails handled by extension manager unless Message Store is enabled)

COEXMode=1 (emails held to be handled by server add-in even without Message Store enabled)

COEXSemaphoreWait

Adds a semaphore to force single threaded processing of all messages, with a timeout specified in seconds. This should never be set except under the guidance of the Genii Software support team, as it may lead to significant bottlenecks.

COEXSemaphoreWait=10 (Turns on single threading with timeout of 10 seconds)

COEXSignalHandling

If present and greater than 0, this turns on signal handling so that a signal will be raised on CTRL-BREAK or other related events. If greater than 1, will raise a signal for segmentation error. Not recommended except for debugging or under guidance from Genii Software.

COEXSignalHandling=n (Turns on signal handling if > 0. Defaults to 0)

COEXLockAddin

Turns on mutex locking for the CXMsgProc server addin (Windows only). Not generally recommended except under the guidance of the Genii Software support team, as it may lead to significant bottlenecks.

COEXLockAddin=0 or 1 (1 - Turn on mutex locking. Default to 0.)

COEXDetectPlainText

Detects emails with no special contents other than text and renders them as plain text. Usually left off, but may be turned on if text messages are expected by receiving applications, or are preferred for other reasons. Adds slightly to the processing load and lowers slightly the network bandwidth load.

COEXDetectPlainText=0 (emails will always be rendered as HTML)

COEXDetectPlainText=1 (emails with no special formatting, images, links, etc will be rendered as plain text, otherwise as HTML)

Doclink Management and Configuration

Description of Doclink Management and Configuration

COEXDocLinkType

Determines the form the converted doclinks will take. If set to 0, doclinks will not be converted at all, and all other CoexLinks Fidelity processing will be suspended, but a preferred way to accomplish that is with the COEXEnabled parameter. The most common choices are 2, for NDL attachments, which works well with all versions of Outlook, and 8, for Notes URL hotspots.

COEXDocLinkType=0	(disable processing – obsolete, use COEXEnabled=0)
COEXDocLinkType=2	(convert to NDL file attachments – leave text in place)
COEXDocLinkType=4	(convert to text URL's – used for Blackberry or text mail)
COEXDocLinkType=8	(convert to Notes URL hotspots – default Notes://)
COEXDocLinkType=18	(convert to NDL file attachments – no text left in place)
COEXDocLinkType=32	(convert to web URL hotspots – default http://)

COEXSkipNoLinksItem

Flag used in certain very heavy load scenarios to exclude processing on any document without a \$Links item. Since programmatically included doclinks will not populate the \$Links item, this should only be used with full understanding that only documents with manually created doclinks will be converted.

COEXSkipNoLinksItem=0	(process with or without \$Links item - default)
COEXSkipNoLinksItem =1	(process only documents with \$Links item)

COEXDoclinkText

Hypertext hotspot text to be used if the doclink is converted to a URL link, whether a Notes URL or Web URL. If the doclink is converted to an NDL file attachment, this text is used to indicate the position of the original doclink (since attachments are stored at the bottom of the message in most e-mail systems). A number is appended to each text string to indicate which NDL attachment goes with which position. Unless the COEXAttachmentText is set, the NDL attachment will be named to match this attachment position with a .ndl extension (e.g., [Link1] in the text matches the Link1.ndl attachment).

COEXDoclinkText=linktext	(text used as hypertext or NDL attachment position)
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COEXAttachmentText

Used as prefix to NDL attachment name, so COEXAttachmentText=DL would result in DL1.ndl, DL2.ndl, and so on. If this parameter is not set, the value from COEXDoclinkText is used. If COEXDoclinkText is also not set, the word “Link” is used.

COEXAttachmentText=prefix (prefix for NDL attachment name)

COEXPreventMultipleProcessing

If this is set to a non-zero value, doclink processing will be skipped for emails which already have NDL attachments. Rarely used except in certain cases where CoexLinks Classic is used, COEXDoclinkPreserve is turned on and sequential servers could process those preserved doclinks.

COEXPreventMultipleProcessing=0 (all emails are processed. Default)
COEXPreventMultipleProcessing=1 (emails with NDL attachments are skipped)

COEXHintServer

Forced value for hint server if the doclink did not have a hint server.

COEXHintServer=server (server to use when no server is specified)

COEXHintServer[n]

Forced value for hint server or %server% for each mapped db if the doclink did not have a hint server. See COEXMapDBTo and COEXMapDBFrom parameters.

COEXHintServer1=server (forced server for first mapped db)

COEXExcludeHintServer[n]

Exclude any doclink with one of the specified hint server values unless the database replica is explicitly included using COEXIncludeReplicaID[n]. The number is not optional, and should start with COEXExcludeHintServer1. Up to thirty servers may be excluded. Most common use is to exclude the mail server to avoid the doclink created by Notes when a mail message is forwarded or replied to from Notes. Doclinks from local replicas can be excluded using the server name “Local”.

To explicitly include specific servers instead of excluding them, use the COEXIncludeHintServer values instead, but the two options are mutually exclusive.

COEXExcludeHintServer1=server (first excluded server)

COEXIncludeHintServer[n]

Exclude any doclink which does not have one of the specified hint server values, unless the database replica is explicitly included using COEXIncludeReplicaID[n]. The number is not optional, and should start with COEXIncludeHintServer1. Up to ten servers may be included. Most common use is to narrow down the scope of where CoexLinks Fidelity is used. Doclinks from local replicas can be included using the server name "Local".

To explicitly exclude specific servers instead of including them, use the COEXExcludeHintServer values instead, but the two options are mutually exclusive.

COEXIncludeHintServer1=server (first included server)

COEXIncludeReplicaID[n]

Only used if hint server for a doclink matches one of the entries in COEXExcludeHintServer[n], or does not match one of the entries in COEXIncludeHintServer and there are included servers, this explicitly includes a replica id that would otherwise be excluded. The number is not optional, and should start with COEXIncludeReplicaID1. Up to thirty replica ids may be explicitly included. Most common use is to exclude the mail server to avoid the doclink created by Notes when a mail message is forwarded or replied to from Notes, then use COEXIncludeReplicaID[n] to specifically include a database on that server.

COEXIncludeReplicaID1=replica-id (first explicitly included replica)

COEXExcludedDocLinkPreserve

Determines whether the doclink should be left in the message when it is excluded by the COEXExcludeHintServer or CoexIncludeHintServer options.

COEXExcludedDocLinkPreserve=1 (excluded doclinks will be preserved)

COEXExcludedLinkText

This text is added if the doclink is excluded by the COEXExcludeHintServer or CoexIncludeHintServer options.

COEXExcludedLinkText=text (excluded doclinks will be replaced with this text)

COEXLimitToDB[n]

Limits processing of messages to specific databases, which are usually specific mailboxes. For example, you can limit processing of messages to those which

flow through the exchange.box if you want to use CoexLinks Fidelity in conjunction with the Microsoft Exchange Connector. This ensures that only messages destined for the Exchange Connector will be converted, and other e-mails which may be routed to Notes client users will not.

If there are no COEXLimitToDB databases specified, there is no limitation. Unless there is a specific reason to restrict processing, it is best to leave this option out.

COEXLimitToDB1=exchange.box (process messages in exchange.box)
COEXLimitToDB2=smtp.box (process messages in smtp.box)

COEXMakeLinkToNDL

Determines whether the message sent to Outlook should be a textual [Link1] or a link hotspot Link1 which launches the Link1.ndl attachment. This should only be used with messages intended for MS Outlook because other email systems may not allow the **file:\link1.ndl** format

COEXMakeLinkToNDL=0 (default – textual [Link1] format in Outlook message)
COEXMakeLinkToNDL=1 (hotspot link will launch attached NDL file in Outlook)

COEXMapDBFrom[n]

Replica id to use when mapping specific databases. See COEXMapDBTo[n] parameter.

COEXMapDBFrom=replica-id (replica id to match for URL mapping)

COEXMapDBTo[n]

URL mapping template to use if the replica id is found in the matching COEXMapDBFrom[n] parameter. If the number is left off, this becomes the default URL mapping, replacing the standard notes://repid/view_unid/note_unid which is otherwise used.

COEXMapDBTo=notes://%server%/%dbid%/%view%/%note%/%ext%
COEXMapDBTo1=http://www.GeniiSoft.com/showcase.nsf/%view%/%note%/%ext%

The URL mapping may contain several mapping variables, which always take the form **%variable%**. The choices are:

- %server%, which is either the hint server or the COEXHintServer[n] value;
- %db%, which maps to __repid.nsf;
- %dbid%, which maps to repid (%db% and %dbid% are mutually exclusive);
- %view%, which maps to the view unid;
- %note%, which maps to the note unid; and
- %ext%, which maps to the “?OpenDocument” or similar string.

COEXForceView[n]

Forces the view in the NDL attachment to be the specified value instead of the value calculated from the link itself. Since this is essentially incompatible with the mapping used by COEXMapDBTo[n], this value is only used if the COEXMapDBFrom[n] replica id matches the link replica id, and there is no COEXMapDBTo[n] value specified.

COEXForceView1=view-id (view-id in NDL format, e.g., OF92E86C9B:DE267E37-ON85256D86:00646583)

COEXPrependDoclink

Determines whether a message should be added to the beginning of messages modified by CoexLinks Fidelity. The COEXPrependDoclinkText1 to COEXPrependDoclinkText20 options are used to define the exact message.

COEXPrependDoclink=0 (no message – same as leaving option out)
COEXPrependDoclink=1 (message will be added)
COEXPrependDoclink=2 (message will be added at end of email)
COEXPrependDoclink=3 (with Fidelity, message added to all emails)
COEXPrependDoclink=4 (with Fidelity, message added to all emails at end)

COEXPrependDoclinkText[n]

Message to be added to the beginning of messages modified by CoexLinks Fidelity if the COEXPrependDoclink option is set to 1. Each subsequent line will be used until an option is not found, so any gaps will stop the message.

COEXPrependDoclinkText1=msg (first line of message)
COEXPrependDoclinkText2=msg (second line of message)
...
COEXPrependDoclinkText20=msg (last possible line of message)

COEXSemaphoreWait

Adds a semaphore to force single threaded processing of all messages, with a timeout specified in seconds. This should never be set except under the guidance of the Genii Software support team, as it may lead to significant bottlenecks.

COEXSemaphoreWait=10 (Turns on single threading with timeout of 10 seconds)

Fidelity Configuration Options

This chapter will list configuration options which are specific to CoexLinks Fidelity and the new Message Store. For configuration options common between CoexLinks Classic and CoexLinks Fidelity, see Chapter 3. For additional configuration options specific to monitoring and debugging options, see Chapter 5.

COEXDetectPlainText

In most cases, CoexLinks Fidelity will simply render every message to MIME using the text/html part, but some customers prefer plain text messages to be rendered as text/plain. Setting this parameter to 1 triggers a scan of each message to see if it contains anything but plain text, defined as text format changes (i.e., font face, color, text size, bold, etc.) or tables, images, links, paragraph format changes (i.e., different indentation, centering, etc.) and so forth.

COEXDetectPlainText=0 (emails will always be rendered as HTML - default)
 COEXDetectPlainText=1 (emails with no special formatting, images, links, etc will be rendered as plain text, otherwise as HTML)

COEXRenderStoredForm

When an email is processed by CoexLinks Fidelity, and it is found to have a stored form, this indicates whether the stored form should be rendered. If this is set to 0 and the Message Store is enabled for stored forms, the form will not be rendered but will be copied to the Message Store. If it is set to 1, the form will be rendered, but it will still be copied to the Message Store in its original form the Message Store is enabled for stored forms.

COEXRenderStoredForm=0 (stored forms will not be rendered)
 COEXRenderStoredForm=1 (stored forms will be rendered - default)

COEXStoredFormFailure

When CoexLinks Fidelity attempts to render a stored form, but the rendering fails, this is a message to use to indicate the failure.

COEXStoredFormFailure=str (message used in place of the rendered form – replaces default message)

6

Message Store Management and Configuration

Description of Message Store Management and Configuration.

COEXMessageStoreDB

The path to the Message Store database, usually local to the server but may be remote using OtherServer!!MessageStore1.nsf syntax. The presence of this value and the successful opening of the database are necessary for any Message Store processing to work. Otherwise, the Message Store feature is simply disabled. Usual convention is to name this MessageStore1.nsf and switch it to MessageStore2.nsf and so forth as size becomes an issue.

COEXMessageStoreDB=db-filepath

COEXMessageStoreFlags

Determines which messages will be saved in the Message Store among the types that may make sense. There are two special values which may be used on their own, or a combination of flags may be set. In addition to these options, encrypted mail is always stored if the Message Store is active.

COEXMessageStoreFlags=1 (digitally signed emails)
COEXMessageStoreFlags=2 (emails with tabbed tables)
COEXMessageStoreFlags=3 (emails with action buttons or hotspots)
COEXMessageStoreFlags=4 (emails containing OLE objects)
COEXMessageStoreFlags=5 (emails with stored forms)
COEXMessageStoreFlags=6 (emails with collapsible sections)
COEXMessageStoreFlags=7 (emails with text popups)
COEXMessageStoreFlags=8 (emails with computed text)
COEXMessageStoreFlags=9 (emails with layout regions)
COEXMessageStoreFlags=+ (important, equivalent to 1345 - recommended)
COEXMessageStoreFlags=* (all, equivalent to 123456789)

COEXMessageStoreLinkOnly

Flag which determines whether message stored in the Message Store should only send a link and disclaimer to the recipients or should include a best-possible rendering along with the link and disclaimer. Not generally recommended, and should only be used with very restricted COEXMessageStoreFlags.

COEXDocLinkPreserve=0 (doclinks will be replaced – same as leaving option out)
COEXDocLinkPreserve=1 (doclinks will be left in place and converted form added)

COEXMessageStoreServer

This is the server to use in the Notes URL or NDL for the doclink back to the Message Store document. If not set, the Notes URL or NDL uses [notes:///](#) which means that only those users who already have the database on their workspace will be able to resolve the link.

COEXMessageStoreServer=server-name

COEXMessageStoreText[n]

Message to be added to the beginning of messages which have been copied to the Message Store. If COEXMessageStoreLinkOnly=1, this and the doclink will be the entire contents of the message, otherwise this will simply appear before the rendered message. If COEXMessageStoreDomains is set, this message and the doclink will not be copied to recipients other than those in the specified domains.

COEXMessageStoreText1=msg (first line of message)
COEXMessageStoreText2=msg (second line of message)
...
COEXMessageStoreText10=msg (last possible line of message)

COEXMessageStoreMixedText[n]

Message to be added to the beginning of messages which have been copied to the Message Store but which have recipients who are not in the domains specified in COEXMessageStoreDomains.

COEXMessageStoreMixedText1=msg (first line of message)
COEXMessageStoreMixedText2=msg (second line of message)
...
COEXMessageStoreMixedText10=msg (last possible line of message)

COEXMessageStoreLinkMsg

If specified, this overrides the default message of “Original message copied to CoexLinks Message Store” which appears before the doclink in messages copied to the Message Store.

COEXMessageStoreLinkMsg=str

COEXMessageDomains

If specified, only emails addressed to the domains in this comma delimited list will use the Message Store. Other emails will be assumed to be “external” users who would not have access to the Message Store. Used in combination with COEXMessageStoreMixSensitivity to determine which rules to follow in deciding about a mix of internal and external domains.

COEXMessageDomains=domainlist

COEXMessageStoreMixSensitivity

Along with the COEXMessageStoreDomains (if specified), this determines whether an email will be considered “internal”, and thus may use the Message Store, or is “external”, and thus will not use the Message Store.

COEXMessageStoreMixSensitivity=*n* (defaults to 0)

0=mix sensitivity only ext send
1=mix sensitivity any ext send
2=mix sensitivity any ext sendcc
3=mix sensitivity any ext
4=mix sensitivity mixed get msg
5=mix sensitivity any internal

COEXUseGroupMembers

When a recipient of a message to be stored in the Message Store is a group name, this determines whether the group name should be added the \$Readers field of the document (so that new members of the group could view it as well) or whether the members of the group should be added individually.

COEXUseGroupMembers=0 (use group name in \$Readers field - default)
COEXUseGroupMembers=1 (use members of group in \$Readers field)

COEXAllowNestedGroups

When a recipient of a message to be stored in the Message Store is a group name and COEXUseGroupMembers is set to 1, this determines whether nexted groups should be looked up as well.

COEXAllowNestedGroups=0 (nested groups used in \$Readers field - default)
COEXAllowNestedGroups=1 (nested groups looked up for \$Readers field)

CoexLinks Clipper

This chapter will discuss how to install and configure CoexLinks Clipper to run on your IBM Notes client, and how it enhances the CoexLinks Fidelity coexistence experience.

Preparing for Installation

In order to install and configure CoexLinks Clipper, you will need to ensure that the core CoexLinks Fidelity license is available. The CoexLinks Clipper software can be downloaded from the Genii Software website as part of the CoexLinks Fidelity distribution, so if you have CoexLinks Fidelity 3.62, you should already have the required DLL or library.

1. Stop the Notes client

You should first shut down the IBM (Lotus) Notes client. The same rule applies for upgrades to CoexLinks Clipper.

You will need to edit your Notes.INI file to add and modify some options. Open the Notes.INI file and proceed to the next step.

2. Copy the software and license into appropriate directories

Copy the CoexLinks Clipper software, named **cxclippr.dll** into the program directory, which is the directory where the Notes client software is kept. Copy the license file, named **coexlinks.lic** for all operating systems, into the Notes data directory.

You will need to edit your Notes.INI file to add and modify some options. Open the Notes.INI file and proceed to the next step. Steps for modifying the Notes.INI information on different server platforms can be found in the appropriate Domino server documentation.

3. Modify the “AddInMenus=” parameter

Search the Notes.INI file for the **AddInMenus=** parameter. If it does not exist already, you can add it, making sure there is always a blank line at the end of the NOTES.INI file if you add it there. Add **cxclippr** after any existing entries, or as the only entry/.

AddInMenus=cxclippr

If there are additional add-in menu extensions, simply add a comma and **cxclippr** at the end of the comma-delimited list.

AddInMenus=addin1, addin2,cxclippr

There can be any number of menu add-ins included in this list, and the relative position of **cxclippr** does not matter.

4. Add additional CoexLinks Fidelity parameters

Below the **AddInMenus=** parameter, you may add any of the CoexLinks Fidelity parameters from the server installation. Most won't matter with CoexLinks Clipper 3.6, but as the utility evolves, it should respect more and more of the customizations that the CoexLinks Fidelity server respects.

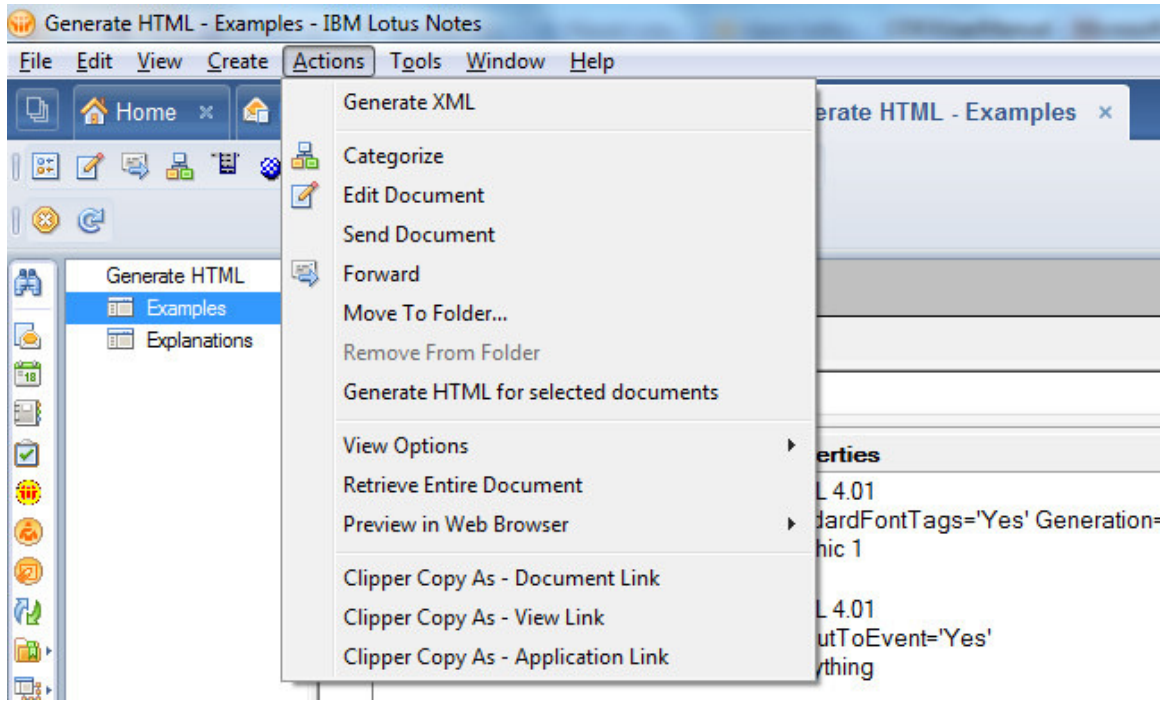
5. Restart the Notes client

When you have finished making changes to the NOTES.INI information on the Notes client, and made sure they are saved, you can safely restart the Notes client. If the CoexLinks Clipper software is properly loaded, you may see a copyright message at the beginning of the Notes log along the lines of:

```
07/04/2014 10:01:32 AM CoexLinks Clipper 3.6: Copyright (c) Genii Software Ltd., 2013- 2014 - All Rights Reserved
```

If you open an application and put the cursor on a document, and then choose the Action menu, you will see three additional entries. These are used to copy the doclink in the appropriate format to the Windows clipboard, after which they can be pasted into Outlook or MS Word or MS Sharepoint or many other applications that accept HTML pasting.

See the screenshot below:



These messages indicate that CoexLinks Fidelity has been loaded with an evaluation license. The production license will only contain the first of these lines:

07/04/2014 09:03:01 AM CoexLinks Fidelity 3.62: Copyright (c) Genii Software Ltd., 2002-2014 - All Rights Reserved



Technical details of NDL file format

This appendix will describe the NDL file format in detail.

NDL File Format

NDL files are used to open documents, views or databases by launching the file. The NDL extension is connected to Notes during the setup (look for it in Hkey_Class_Root).

XML Style tags	Type	Comment
<NDL></NDL>		Information is enclosed between these two tags
<REM></REM>	Optional	Everything is a comment between these tags
<FLAGS ADDTEMPORARY=value NOREPLSEARCH=value>	Optional	When the ADDTEMPORARY flag is set to a value of 1, no database icon is added on the workspace. When the NOREPLSEARCH flag is set to a value of 1, no search is performed to find a replica database on the stacked icons
<REPLICA></REPLICA>		The Replica ID of the database to use must be enclosed between these two tags, Example : <REPLICA>C1277527:004B6124</REPLICA>
<VIEW></VIEW>	Optional (not used for db link)	The View ID of the view that will be opened or which contains the document : Example : <VIEW>OF116301F7:C9AF7BB2- ON80256295:00678F47</VIEW> Note that if the COEXForceView[n] parameter is specified, this value can be replaced selectively for a particular database replica id.
<NOTE></NOTE>	Optional (not used for view link or db link)	The Note ID of the document that must be opened, Example : <NOTE>OFD9E901DD:A49FC1F3- ONC12565FB:00639228</NOTE>
<HINT></HINT>	Optional	Name of the server : CN=ServerName/O=org

Technical Details of Notes URL Format

This appendix will describe the Notes URL format in detail.

Notes URL Format

Notes URL are used to open documents, views or databases wherever URL hotspots are supported, and is an alternative to the NDL file. There are five types of Notes URL, but only three are automatically used by CoexLinks Fidelity:

```
notes://host/db_replica?OpenDatabase
notes://host/db_replica/view?OpenView
notes://host/db_replica/view/doc?OpenDocument
notes://host/db_replica/agent?OpenAgent (not normally used by CoexLinks
Fidelity)
notes://host/db_replica/form?OpenForm (not normally used by CoexLinks
Fidelity)
```

The “host” is the Domino server name, also known as the “hint server”. This can be overridden using the COEXHintServer=server parameter. For a doclink pointing to a local database, no host is specified, so there will be three slashes in a row, such as notes:///db_replica/view_unid/doc_unid?OpenDocument

The “db_replica” is the 16-character replica id for the database. When specifying a custom URL mapping, use %dbid% for this value.

The “view” is the 32-character unique id for the view, or the viewname, or a zero if no view is specified. When specify a custom URL mapping, use %view% for this value.

The “doc” is the 32-character unique id for the document. When specifying a custom URL mapping, use %note% for this value.

When specifying a custom URL mapping, you can also add %ext% at the end, as this will use ?OpenDocument for a doclink, ?OpenView for a viewlink or ?OpenDatabase for a dblink.

<HINT></HINT>	Optional	Name of the server : CN=ServerName/O=org
---------------	----------	--

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notes://host/db_replica?OpenDatabase
notes://host/db_replica/view?OpenView
notes://host/db_replica/view/doc?OpenDocument
notes://host/db_replica/agent?OpenAgent (not normally used by CoexLinks
Fidelity)
notes://host/db_replica/form?OpenForm (not normally used by CoexLinks
Fidelity)
```

The “host” is the Domino server name, also known as the “hint server”. This can be overridden using the COEXHintServer=server parameter. For a doclink pointing to a local database, no host is specified, so there will be three slashes in a row, such as notes:///db_replica/view_unid/doc_unid?OpenDocument

The “db_replica” is the 16-character replica id for the database. When specifying a custom URL mapping, use %dbid% for this value.

The “view” is the 32-character unique id for the view, or the viewname, or a zero if no view is specified. When specify a custom URL mapping, use %view% for this value.

The “doc” is the 32-character unique id for the document. When specifying a custom URL mapping, use %note% for this value.

When specifying a custom URL mapping, you can also add %ext% at the end, as this will use ?OpenDocument for a doclink, ?OpenView for a viewlink or ?OpenDatabase for a dblink.

<HINT></HINT>	Optional	Name of the server : CN=ServerName/O=org
---------------	----------	--

Case sensitivity with Linux and Windows

This appendix will describe how the difference between case sensitive Linux and case insensitive Windows is handled.

Linux is case sensitive

The Linux operating system is case sensitive, which means that you could have two databases named “showcase.nsf” and “Showcase.nsf”, and that a command on the Linux command line to change the working directory to the Notes executable directory would be “cd \$Notes_ExecDirectory” and would not work as “CD \$Notes_ExecDirectory” will not.

To simplify matters for Notes administrators who might work with both case insensitive operating systems such as Windows as well as case sensitive operating systems such as Linux, all server addins and extension managers and console command parameters are converted to lowercase before being executed. Thus, the commands “sh ta” or “SH TA” are equivalent from the server console.

Due to this conversion, all server addins and extension manager files must be in lowercase, which is why the two files are named **cxmsgproc32** and **libcoexlinks32.so** on Linux. The license file, **coexlinks.lic**, is lowercase on all operating systems.

Because the lowercase conversion is automatic in both the server console and in the notes.ini file, common documentation practice is to use the propercase names when issuing server commands, such as “tell CXMsgProc32 q”, and we follow that convention in this manual. Likewise, all CoexLinks Fidelity notes.ini environment variables are treated as case insensitive, so the following are equivalent:

```
COEXDocLinkType=8  
coexdoclinktype=8  
CoexDocinkType=8
```

Windows is case insensitive

The Windows operating system is case insensitive, which means that you *cannot* have two databases named “showcase.nsf” and “Showcase.nsf”, and you *cannot* have two server addins named ncxmsgproc32.exe and nCXMsgproc32.exe.

Because of this, all server addins and extension managers and console command parameters ignore case entirely. Thus, the commands “sh ta” or “SH TA” are equivalent from the server console.

For the purpose of CoexLinks Fidelity, this means that the Windows 32-bit files are called **nCXMsgProc32.exe** and **nCoexLinks32.dll** solely for readability, and will work regardless of whether they are changed to another case variation.

As described before, common documentation practice is to use the propercase names when issuing server commands, such as “tell CXMsgProc32 q”, and we follow that convention in this manual. But if an administrator finds it easier to type “tell cxmsgproc32 q”, it will function identically, just as it does on Linux. Likewise, all CoexLinks Fidelity notes.ini environment variables are treated as case insensitive, so the following are equivalent:

```
COEXDocLinkType=8  
coexdoclinktype=8  
CoexDocinkType=8
```