Kerio Outlook Connector (Offline Edition)

Best practice deployment guide

Printing Date: June 1, 2010

Kerio Connect includes a new generation version of the *Kerio Outlook Connector* extension. This new generation product, called *Kerio Outlook Connector (Offline Edition)* enables *Microsoft Outlook* users to manage their email accounts also when they are offline and it is not possible for them to connect to *Kerio Connect*.

The objective of this document is to help mailserver administrators deploy their *Kerio Outlook Connector (Offline Edition)* smoothly as well as to briefly focus on differences between both *Kerio Technologies* extensions for *Microsoft Outlook* (referred to as *Outlook* in this document).

1 KOC versus KOFF

The first generation of *Kerio Outlook Connector* (referred to as *KOC*) allowed to manage email accounts only if there currently was an online connection between the client and the server.

The new version of the extension, *Kerio Outlook Connector (Offline Edition)* (referred to as *KOFF*) provides also the option of managing email accounts in offline mode (when it is not possible to connect to the mailserver). In addition to this function, it provides many improvements, such as searching in message bodies, grouping of email messages and others.

2 Preparation

First, it is necessary to prepare for the process:

2.1 Update of clients

Before installing *KOFF*, make sure that the operating system and *Microsoft Office* (especially *Outlook*) on the client side are updated to their latest versions.

Supported operating systems and required *Service Packs*:

- Windows 2003 Server SP3
- Windows XP SP2
- Windows Vista with the latest Service Pack installed.

Supported *Outlook* versions and required *Service Packs*:

- Outlook XP SP3
- Outlook 2003 SP3

- Outlook 2007 SP1
- Outlook 2010

2.2 Free disk space

The local store is implemented on top of the local database file. Its size is the sum of size of stored data and supportive database structures. The free space needed is bigger than the size of the mirror `.eml` file on the server. It is not possible to figure out the size of a particular database. It depends especially on the particular user's mailbox contents. Simple attachment-free messages can make the proportion of user's and supportive data fifty-fifty, so that the local database would be double-sized in comparison with the data saved on the server. However, attachments need less space in the local database than they do on the server, because they are saved in their native format, while in the case of `.eml` files on the server the *Base64* encoding is used (with the 3:4 ratio).

The local database file is not always larger than its mirror on the server. This could be the case if a user does not synchronize the full message bodies in some folders (i.e. synchronizes only message headers).

Keep in mind that size of the local database file does not get smaller if messages are removed because the freed space gets filled with new messages. This implies that growing of this file is expected.

Another information to be aware of is location of the local database file on the client. By default, the local database file is saved in the user's profile on the system disk.

- *Windows Vista:*

  `C:\Users\<user>\AppData\Local\Kerio\Outlook Connector\<profile_name>`

- *Windows 2000/XP:*

  `C:\Documents and Settings\<user>\Local settings\Application Data\Kerio\Outlook Connector\<profile_name>`

This path cannot be changed. However, it is possible to use the *Microsoft's Junction* tool which enables creation of virtual links in the *NTFS* file system. This tool can be downloaded from the *Microsoft* website: http://www.microsoft.com/technet/sysinternals/FileAndDisk/ Junction.mspx

2.3 Network communication

Unlike its ancestor, *KOFF* communicates with the server exclusively via *HTTP* or *HTTPS* (*KOC* also used *IMAP* and *SMTP*). It is therefore necessary to make sure that such connections between the client and the server would not be blocked.

3 Installation

These instructions provide recommended guidance through deployment of *KOFF* (either migration from *KOC* or a new implementation of the extension) in a production environment.

3.1 Kerio Connect

The first essential thing to be done is installation or upgrade of *Kerio Connect* to the recent version. This procedure is simple, intuitive and it is described thoroughly in the product's documentation so this part will be skipped in this document. However, it is important to not skip it in reality since *KOFF* does not support *Kerio Connect* versions older than *6.5.0*.

3.2 KOC update

If a previous version of *Kerio Connect* (*6.4.x*) and the *KOC* extension for *Outlook* have already been used in the production environment, it is strongly recommended to upgrade existing *KOC* components to the up-to-date *Kerio Connect* version before installing *KOFF*. Upgrade to the latest version will be offered automatically upon upgrade of the server and startup of *Outlook* on client hosts.

3.3 KOFF installation

KOFF installation is almost identical with installation of the previous generation extension. If this is the first installation of an *Outlook* plugin, it is first necessary to install *MS Outlook* and start it at least once. Once *KOFF* is installed, it is necessary to create a new *Outlook* profile.

In case of migration from *KOC* to *KOFF*, the installation wizard first uninstalls *KOC* and then installs *KOFF*. In this case it is not necessary to create a new profile because the existing profile is converted automatically. Description of the conversion is provided in the following chapter.

3.4 Profile conversion

The installation wizard converts all *KOC* profiles of the user currently logged on the host during the installation to the *KOFF* format. In case that *Kerio Connect* is available, the conversion includes also the configuration of its account. Upon the next startup of the same *Outlook* profile, initial synchronization of messages with the local database is started.

If *Kerio Connect* is not available during the conversion, the configuration of the account cannot be finished. To synchronize account settings with the server, open the dialog for the account configuration of the particular profile and finish the configuration by clicking on *OK*. *Kerio Connect* must be available for this action . Here is the path to the configuration dialog: *Start → Settings → Control Panel → Mail → Properties <profile_name> → E-mail Accounts → Change <account_name>*.

If multiple users work on the same computer, users who did not install KOFF themselves must convert their profile by running the conversion manually: *Start → Programs → Kerio → Outlook Profile Conversion Utility*.

Conversion of *KOC* profiles to *KOFF* profiles does not affect accounts of other types (*IMAP*, *POP3*, etc.).

3.5 Global installation by using Active Directory

It is also possible to install *KOFF* for all users directly from the *Active Directory* domain. However, this installation method is highly unrecommended in cases where there is the danger of mass synchronization of too many clients at one time (this might lead to the server's overload). This issue is focused later in this document.

4 Initial synchronization

Initial synchronization is a process started upon the first logon to a new profile in *Outlook* extended by *KOFF*. Within the process, data is copied from the server to the user's computer thus creating the *KOFF's* local database.

4.1 How the initial configuration works

To make managing of email accounts in offline mode (without connection to the server) possible, all user data (email messages, contacts, events, tasks and notes) must be stored in a local database on the client's system. Synchronization of the local database with the server runs in the background without user's interaction. Instead of *PST* files, *KOFF* uses a proprietary built-in database (*Firebird*, version 2).

4.2 Default synchronization settings

The default configuration of the initial synchronization is as follows:

- The *Inbox* folder is fully synchronized (i.e. complete email messages including attachments are stored in the local database).
- In other email folders, only message headers are involved in the synchronization.
- Encrypted and digitally signed messages are always fully synchronized.
- Other folders (contacts, calendar, tasks and notes folders) are always fully synchronized.

Default settings can be changed (see documentation). Let us focus on the issue of how to set full synchronization of all folders. Right-click on the root folder (*Mailbox of...*) and select *Folder properties... / Folder synchronization / Synchronize whole messages* and then *Apply these settings to all subfolders*.

4.3 Impact on the server's and client's performance

Initial synchronization is very demanding with respect to system resources of both the client and the server. Speed and total time of initial synchronization depends on several factors:

- Load on the server depends above all on number of clients being synchronized at the particular moment. The hard disk performance is the main limiting factor on

the server's side. For example, when performing tests on a PC (*Pentium 4*, 2.4 GHz, 1 GB RAM, 7200 RPM HDD), during a synchronization of several clients at once, the measured data transfer speed in the server-to-client direction was approximately 120 MB per minute. If possible, it is recommended to install *KOFF* on one client station after another to stretch and thus reduce load on the server. Queued users can use *KOC* meanwhile.

- Load on the client depends on data volume and complexity of the folder tree structure in the particular user account. However, during the initial synchronization process, the response time of *Outlook* can get longer and uncomfortable. The icon in the system tray's notification area displays the current status of the synchronization. When the synchronization is finished, the system's response will become smoother again.

4.4 KOFF deployment

This section provides recommended instructions for implementation of *KOFF* in a production environment. The basic configuration is the latest version of *Kerio Connect* installed on the server and *KOC* 6.5.0 and higher installed on all clients.

Step 0
Install the latest *Kerio Connect* on the server and *KOC* on client stations.

Step 1
Install *KOFF* on one workstation, perform the initial synchronization and get familiar with all functions.

Step 2
Install *KOFF* on a few clients (approximately 5), perform the synchronization and monitor load on the server and speed of individual synchronizations.

Step 3
Put gained information (load on the server and synchronization speed) in practice by setting optimal number of synchronized clients and perform their upgrade and initial synchronization.

Step 4
Repeat the previous step as many times as necessary to include all clients in the deployment.

Notice that following of these instructions is recommended but not necessary!

5 Troubleshooting

5.1 Collision with free/busy

In new profiles, the default protocol for free/busy is HTTPS. There might be a collision if *Kerio Connect* uses a self-signed certificate (set by default after installation). In such cases, an error is reported by a bubble message displayed in the system tray's notification area and

the free/busy function will not work. To resuscitate the function, install this certificate on the client's list of trusted certificates.

5.2 Task requests incompatibility

For task requests, *KOFF* uses the same format as the *Kerio WebMail* interface. For this reason, these items are not compatible with *KOC*.

5.3 Downgrade to KOC

In case of serious problems with *KOFF*, it is possible to downgrade to *KOC* again quite smoothly. Although *KOC* is removed within *KOFF* installation, both extensions can be installed on the same computer without any collisions. After *KOC* reinstallation, it is necessary to create a new profile since the original one has been converted for *KOFF*. The *KOC* installation wizard does not remove *KOFF*.

5.4 Logging of important information

KOFF also brings new options of more detailed logging of communication in files on the server. These files are useful for possible troubleshooting in cooperation with the *Kerio Technologies* technical support:

- *KOC Offline requests*, *WebDAV requests* and *HTTP server* records in the *Debug* log.
- The `debug.log` file of the particular user's profile (the full path is provided above, see the part referring to location of the local database file in section 2.2). Bear in mind that the `Local Settings` folder is hidden by default and it is therefore necessary to first allow displaying of hidden folders and files.

5.5 Synchronization and data conversion related issues

If a server-to-client synchronization of a message fails, the client gets a detailed report including error number. Messages that failed to be synchronized are saved in `Store / Mail / <domain_name> / <account_name> / __keriomapi__STORE\Failed_Conversions` on the server.

Messages that failed in client-to-server synchronization are saved in `Local Failures`. These messages can be exported from *Outlook* as *MSG* files.

In either of the cases, please archive the message in a *ZIP* file and send it along with the error report to *Kerio Technologies* technical support.

This guide provides detailed description on *Kerio Connect*, version *6.5.0* or higher. All additional modifications and updates reserved.

This document does not substitute for the product's documentation. Corresponding versions of the administrator's and the user's guides are available at the Kerio Technologies website.