

# “Real World” Coexistence Challenges

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## Challenges?

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Coexisting migration paradigms have challenges, some of which can be overcome with technology, but for which others have no treatment other than disclosure to those affected.

Following on from the information provided in the document [Co-existence vs One-time Migrations](#) (hyperlink embedded), details will be presented in this document that show many of the challenges that should be considered if the choice is to coexist. Furthermore, although the descriptions of the challenges are generalized in syntax, they come from first-hand experience of over 12 years working with customers.

### Technology Support

In a long, or short, coexistence period there are often several additional technologies that must be deployed and maintained in order to mitigate a negative response from end users. This adds complexity...and complexity generally increases risk.

If any of the coexistence components fails or misbehaves, it affects the end user experience and the end user expectation. End users will quickly call out any difference between expectation and experience and will quickly blame IT and the project for the perception. It is very difficult (if not impossible) to convince an end user that the change in experience is not related to the project. From their mindset: “things were working fine yesterday...but now things are different. I didn’t do anything different so it must be the project”.

The same idiom used for presentations is equally valid here: “You will live and die by technology.”

Consider these complexities when chosen in a project:

- Federation: used to provide a thin level of cross-forest authentication. This is potentially used to handle single-sign-on scenarios.
- Directory Sync: used to update the GAL with respect to changes that occur between the start of the project and its completion.
- Exchange 2010 deployment within the source environment: this is usually required for Free/Busy support and is a dependency of the Microsoft Availability Service that provides this feature.
- Email gateway support: mail needs to properly route ON A PER USER BASIS between the source and target environments. Mail gateways have to be configured to allow for this any changes to ingress/egress of mail by policy or technology must be tracked to ensure that it does not affect mail flow.

This may also require additional SSL certificates to be acquired in order to support non-primary SMTP

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name spaces (typically if TLS is a requirement for SMTP traffic).

A common strategy for coexistence is to have 2 additional SMTP namespaces that are used to route mail between the 2 orgs during coexistence: similar to src2trg.company.local and trg2src.company.local. Special consideration must be made as to how those new SMTP namespaces will be setup and how they will route: direct relay vs thru a gateway.

- Additional, and potentially complicated, communication to end users to set expectations: this activity can prove to have the most positive AND negative impact. Careful word-crafting is necessary so as not to inadvertently upset the end user community.

Each component that is introduced must be maintained for the duration of the migration project. The maintenance of these components and the value they provide have a direct relation to how much tracking and monitoring is placed on them. This can be especially frustrating when it is considered that most if not all of the coexistence components will only survive thru the migration period.

Lastly, there is risk with these components failing or behaving differently than intended after the migration effort is started. Many times such issues arise only under real load of which testing frameworks have a difficult time exposing. There is nothing more frustrating than testing something and seeing it work properly only to have it destabilize under real load. Such is the law of complexity.

## Features

There are features in Outlook+Exchange that just cannot work between 2 independent Exchange environments.

A user in OrgA cannot give a user in OrgB permission to open his/her calendar. Even if a domain trust was placed between the 2 Orgs, UserB could not browse and open UserA's calendar. This is solely and completely a limitation of Microsoft Exchange and has to do more with the GAL than permissions.

Consider that Outlook and many of its features are completely driven by what is available in the Global Address List (the GAL). If something is not in the GAL, it doesn't exist.

Here's a list of things that are not supported between Exchange Orgs:

- Open someone else's folder.
- Shared mailbox access: shared mailbox is in OrgA and the user needing it is in OrgB – this doesn't work.
- Free/busy details. Regardless of federation and exchange's availability services, access to calendar item details don't work. A user might be able to see free/busy status, but rarely does it work where the remote user can open and see the details of a calendar item.  
Remember that the end user community treats any inconsistency between experience and expectation as a technical issue, and in the case of a migration will blame the project and those involved.
- Public Folder access. A user in OrgA cannot access a Public Folder in OrgB.

- Distribution Lists. A manager in OrgA cannot add a user in OrgB to his/her Distribution List. Only objects that exist locally can be added to a DL. Directory Sync helps with this challenge, but only when the 2 directories are “in sync” at the exact time the manager attempts the activity.

## Behavioral changes

Consider that there are some end-user experience differences between different versions of Exchange. These differences are often perceived as the new environment being slow or problematic, when from a technical point of view all is operating 100% accurately. The reason for this perception is because end users can (and will) compare their experiences between the 2 environments. Those differences in experience, although completely baseless, are real in the eyes of the end users and are difficult to challenge.

For instance, in exchange 2003 and earlier, if John and Joe both have mailboxes on the same Exchange Server, regardless of database, they can send mail to each other with no restrictions because mail on the same server does not go thru a transport. This means that for the past several years, they have been able to send very large attachments and generally see INSTANTANEOUS arrival of messages.

Exchange 2007 and later changed this paradigm and ALL MAIL moves thru the transport layer, even if 2 users are on the same database.

The relevance here is that if you coexist, Joe and John, when they discover this change in experience, will blame it on the project. Worse is the fact that they are not likely to formally submit a help ticket on this change, but will certainly communicate such to their peers.

Conversely, if all users are migrated in a single event, all will have the same experience equally. Although they can still blame the project, they can only blame the choice of target platform and not the project or the execution. Perception and perspective are key business topics.

Another difference to consider is the perception of the responsiveness of email. Prior to migration, users have become used to near instantaneous delivery of mail, even when sent between servers (reference to above). Users become accustomed to hearing the “ding” of new mail arriving at their peer’s desk.

Coexistence will change that experience due to SMTP queuing and the transfer of mail from one system to the other. What used to be quick satisfaction of delivery by way of the “ding”, is now several seconds to possibly a minute later. Similar to the previous topic, users that experience this will not likely create a help desk ticket, but they will “feel” that the new environment is slower than the old one.

## Distribution Lists

Even with a directory sync process in place, DLs still become a sore topic for end users.

Consider that very often a department manager adds or removes DL members via Outlook. Next consider a case where that manager wants to add/remove a migrated user. There will be some delay in the result because of the sync process running on timed intervals. This delay will impact the newly added member. If

that new member (who has been migrated) wants to send mail to the DL, he/she could find that they are unable (if using the feature to only allow members to send to the group...and don't assume that it is not) because the local version of the same group has not replicated the membership.

Additionally, any other migrated users that send to the group might find that the new member is not receiving their email because the sync has not occurred yet.

Again, a reminder about complexity...this is one that is very complex and very difficult to explain not only to technical teams but even more so to end users.

### Schedule and Timeline

Negative perception by end **users** is the most common way that the **duration** of a coexistence migration plan is **extended**. Think about that statement for a moment before proceeding. The key parts of which are: **...users...duration...extended**. Nobody wants a migration plan in which users can affect the duration...yet it happens very often.

When the negative perception is received by the non-migrated users from the migrated users, regardless of how silly or irrational the claim, the non-migrated users become anxious. If the voice of the migrated users contain anyone with any influence (direct or indirect), then the anxiety will be even greater.

At a certain point in the timeline, and often sooner than one would expect, some group of non-migrated users will opt-out of migration. Their leader or manager will demand that they migrate at a later date and they will make great claims as to why and often succeed in getting their delay.

When this happens, a lot of cascading of actions have to take place. Timelines for all of the coexistence components have to be extended for support. Re-analysis of other events have to be mixed in to consider new conflicts (like sales meetings or other business events). In the end, IT is blamed, at least by the end users, for not anticipating this challenge and frustration ensues.

Extension of the timeline is certainly best to be avoided. Very many times there are business activities that are planned and rely on migration dates being met for those that migrate. To reiterate from experience, there can be sales meetings or other types of meetings (consider conference room mailboxes) that are booked and money spent by the business based on the expectation that those users involved should be migrated by the proposed date.

There may also be contractual impacts of timeline extensions. Consider any contracted services that are scheduled to end on a particular date and the reason is that the service is not needed after the migration. There can be monetary penalties if such things have to be extended, especially if it's last minute.