

Blue Prism

MAPIEx User Guide

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1. Introduction

This document is a guide to using the MAPIEx library within Blue Prism[®]. The MAPIEx functionality allows interaction with mail servers via profiles in Outlook. It can be used to list, send, receive, and manipulate e-mails for the configured e-mail address.

2. Installation and Setup

To find information on how to install and set up the MAPIEx library, please reference the MAPIEx Installation Guide and Release Notes for your appropriate version, found on the Blue Prism Portal under Product -> Releases -> Addons.

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Product Releases

Please select a major version number from the list below to access the available releases for that version.

Product Addons Extras

Version: Addons

Release Title	Release Notes	Installer
MAPIEx 1.1.9 (Share)	 MAPIEx Installation Guide and Release Notes v1.1.9.pdf	 BluePrismMapiEx1.1.9.msi
MAPIEx 1.1.15 (Share)	 MAPIEx Installation Guide and Release Notes v1.1.15.pdf	 BluePrismMapiEx1.1.15.msi
MAPIEx 1.1.13 (Share)	 MAPIEx Installation Guide and Release Notes v1.1.13.pdf	 BluePrismMapiEx1.1.13.msi

3. Standard MAPIEx Actions

The following are the typical actions performed using the MAPIEx VBO/Library (in the order they are listed in the business object):

a. Configure

The Configure action lets you change two options for operations through the MAPIEx VBO: “Folder Separator” and “Include Recipient Email Addresses”. This action can simply be included near the beginning of an initialization stage, or at any time when one of the following values needs to be changed.

- The “Folder Separator” value can be set such that any action which requires a path (e.g. “Move Mail”) will use it as the separator between separate folders in that path. The default value is nothing – that is, no separator is set, so the entirety of the path value is a single object/folder name.
- The “Include Recipient Email Addresses” value defines whether “Get Mail” returns to/CC include recipient e-mail addresses. The default value is “false”.

b. Delete Mail

The “Delete Mail” action can be used to delete an e-mail. It requires definition of both the profile name and the ID of the e-mail to delete. Success can be confirmed with the output value. This action will only delete a single e-mail at a time, so if more than one must be deleted this action must be built into a loop.

Inputs:

- Profile – The name of the mail client profile to delete an e-mail from.
- ID – The unique ID of the mail message. This is most easily retrieved by using an earlier “Get Mail” or “List Mail” action to acquire the ID into a data value or collection.

Outputs:

- Success – a flag indicating whether or not an e-mail was actually deleted.
- Error Message – If an error was encountered, the content of the error message.

c. Get Contacts

This VBO action gets a list of contacts from the mail profile. Note, this does not query server-side address books – it only accesses the profile’s private contacts list. The “Given Name” and “Surname” fields are listed as required, but actually only act as filters – they can be omitted to retrieve the full list of contacts.

Contacts are returned in a collection defined by the VBO. Fields in the collection are listed below.

Inputs:

- Profile – The name of the mail client profile to get the contacts list for.
- Given Name – The first name of contacts to look for. Optional, and acts as a filter against rows returned.
- Surname – The last name/surname of contacts to look for. Optional, and acts as a filter against rows returned.

Outputs:

- Contacts – a collection of the actual contact values.
 - Personal Title
 - Job Title
 - Display Name
 - Email Address

- Business Phone Number
- Office
- Company
- Success – a flag indicating whether the attempt to retrieve contacts was successful.
- Error Message – If an error was encountered, the content of the error message.

d. Get Mail

This action gets a single mail item from the profile's mailbox. The input fields, as listed below, affect the behaviour of both the query and the retrieval, and should be considered carefully before executing the action.

Inputs:

- Profile – Required, this defines the mail profile to retrieve the message from.
- Sub-Folder – Defines the folder or sub-folder to look for mail in. If this is excluded, mail is retrieved from the Inbox. This works in conjunction with the "Folder Separator" definition (see "Configuration" action).
- Get Oldest? – Required, a flag that says whether to read the oldest qualifying or newest qualifying e-mail from the server.
- Unread Only? – Required, a flag that indicates whether to only read unread messages.
- Move to Sub-Folder – Optional, and defaults to nothing (e.g. not moving the e-mail). If defined, the e-mail will be moved to the indicated sub-folder after being read by this action. This works in conjunction with the "Folder Separator" definition (see "Configuration" action).
- Delete? – Required, a flag that indicates whether or not to delete the mail after it is read.
- Attachment Directory – Optional, this input parameter defines the path on the system to store any attachments found on the e-mails. If not set, attachments will be ignored.

Outputs:

- Sender Name – the name of the sender off the e-mail.
- Sender E-mail Address – the e-mail address of the sender off the e-mail.
- Subject – The subject of the e-mail.
- Sent Time – The timestamp the e-mail was sent.
- Received Time – The timestamp the e-mail was received.
- Message Body – the text body of the e-mail.
- Attachment Count – The number of attachments on the e-mail (may or may not be retrieved; see input parameters).
- Attachment Names - The names of any attachments. If there are multiple attachments, they are included in a single string separated by semi-colons.
- To – the To e-mail address.
- CC – any CC'd e-mail addresses.
- ID – the unique ID of the e-mail.
- Success – a flag which indicates whether the action was successful, whether or not an e-mail was retrieved.
- Error Message – If there was an error, the text of the message.

e. List Mail With in Datetimes

This VBO action provides a list of all e-mails within a date range. Unlike “Get Mail”, only the e-mail IDs are retrieved.

Inputs:

- Profile – Required, the mail profile to list e-mails from.
- Sub-Folder – Optional, defines the folder or sub-folder to list mail in. If this is excluded, mail is retrieved from the Inbox. This works in conjunction with the “Folder Separator” definition (see “Configuration” action).
- Unread Only? – Required, a flag to indicate whether or not to only list unread e-mails.
- Minimum Date Time – Optional, the earliest date time to include in this list. If excluded, it is all e-mails before “maximum date time” or now, whichever is earlier.
- Maximum Date Time – Optional, the latest date time to include in the retrieved list. If excluded, it is all e-mails after “minimum date time” or the earliest e-mail, whichever is later.

Output

- IDs – A Collection of the IDs of the list of retrieved e-mails. Further details on any listed e-mails must be retrieved using a different action.
- Success – A flag indicating whether or not the action was successful, whether or not any e-mails were returned.
- Error Message – If an error occurred, the body of the e-mail.

f. Reply To Mail

This VBO action allows you to respond to an existing e-mail, defined by the e-mail’s ID. The ID must be retrieved using a different VBO action, such as “List Mail” or “Get Mail”.

Inputs:

- Profile – Required, the mail profile to use for sending the reply.
- ID – Required, the unique ID of the e-mail this will be a reply to.
- Reply To All – Required, a flag that indicates whether to respond to all recipients, or only the primary recipient.
- Include Original Mail – Required, a flag that indicates whether to quote the original mail in the reply.
- Attachment – Optional, the full path of the attachment or attachments to be included in the e-mail. If more than one attachment is to be included, then the paths must be separated by semicolons.
- Message – Required, the body of the reply to send.

Outputs:

- Success – A flag indicating whether the action was successful or not.
- Error Message – If there was an error, the body of the error message.

g. Move Mail

This VBO action allows a known e-mail to be moved to a new folder. This also allows the implicit creation of folders.

Inputs:

- Profile – Required, the mail profile to move an e-mail in.

- ID – the Unique ID of the e-mail, discovered using another action like “Get Mail” or “List Mails”.
- Move to Sub-Folder – the Name of the folder to move it to. If this is excluded, the e-mail is moved to the inbox. If the chosen folder doesn’t exist, it is created before moving the e-mail.

Outputs:

- Success - A flag indicating whether or not the action was successful.
- Error Message – If an error occurred, the body of the error message.
- ID – After it has been moved, the new ID of the e-mail.

h. Send Mail

This VBO action allows sending of an entirely new e-mail. Other than the Profile, no other pre-existing information is needed (e.g. no message ID must be known).

Inputs:

- Profile – Required, the name of the mail profile to use for sending this e-mail.
- To – Required, the e-mail address of the primary recipient.
- CC – Optional, the e-mail addresses of any CC recipients. If more than one is provided, they must be separated by semi-colons.
- BCC – Optional, the e-mail addresses of any BCC recipients. If more than one is provided, they must be separated by semi-colons.
- Attachment – Optional, the path to the attachment or attachments to be included in the e-mail. If more than one is provided, they must be separated by semi-colons.
- Subject – Required, the subject of the e-mail to send.
- Message – Required, the body of the e-mail to send.

Outputs:

- Success – A flag indicating whether the action was successful.
- Error Message – If an error occurred, the body of the error message.

4. Implementation Tips

This section details some useful tips and things to remember while working with the MAPIEx library.

a. Infrastructure

- When planning a Blue Prism install that is expected to use MAPIEx, remember to plan for the licensing and maintenance considerations of having Microsoft Outlook on every machine in the Blue Prism cluster.
- When installing the robot environments, ensure that the correct mail client (Generally Microsoft Outlook) is defined as default mail client in HKEY_LOCAL_MACHINE\SOFTWARE\Clients\Mail.
- Double-check that the MAPIEx DLLs are in the Blue Prism directory, or at least that they are in a path matching that shown in the MAPIEx VBO. This will help avoid errors in your Blue Prism processes.
- If you are working with attachments, plan a location or locations where attachments can be stored between retrieving the e-mail c

b. Mailboxes

- Blue Prism robots should always be set up with their own mailboxes. While it is technically quite easy to access the mailbox from multiple sources, humans acting on e-mails in the mailbox can put the mailbox in a state the Robot does not expect and cause processing errors.
 - Whenever possible, have a single robot handle reading all e-mails from the mailbox as a background task – e.g. checking e-mails and inserting them into a queue as work items. This will eliminate the chance of two robots stepping on each other during mailbox access; it is the most robust design and the easiest to support.
 - Similarly, whenever possible, have a single robot handle all e-mail sending using the mailbox profile; again this can be supported using a work queue (e.g. “Pending Mail” queue). This is the most robust and easiest-to-support design.
- For any mailbox serviced by Blue Prism, consider filtering/securing inbound messages using a Whitelist or rule to ensure invalid work items are not being received, either accidentally or intentionally.

c. Operations

- Remember that, if a Robot fails or goes down for any reason, e-mails may have failed to have been processed or sent properly. The status of any relevant e-mails must be considered during support/recovery procedures.
- Always have the e-mail client running in the background when using the MAPIEx library.

5. Issues and Support

For support with using the MAPIEx library, please reference the Blue Prism Knowledge Base on the Portal or – if a specific issue is not addressed on the Knowledge Base - contact Blue Prism Support for further help.

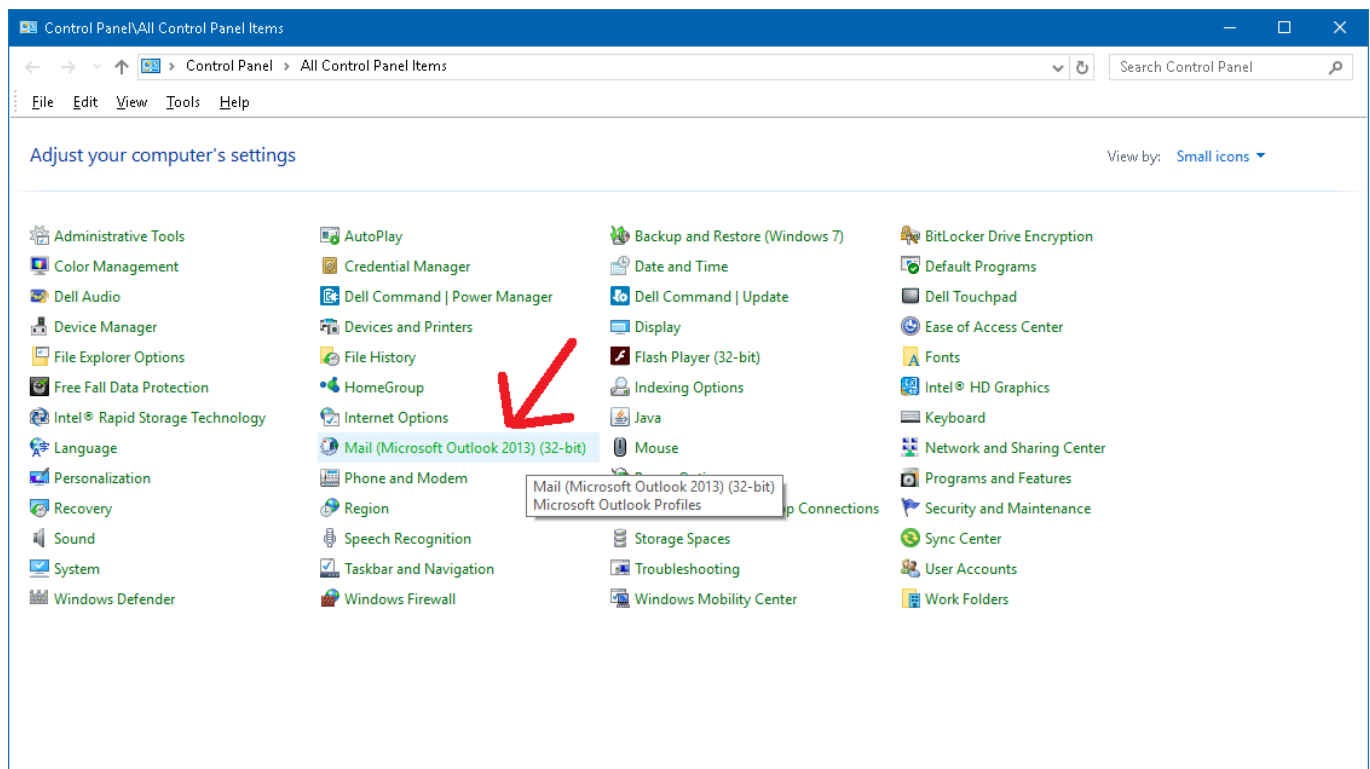
Common Issues

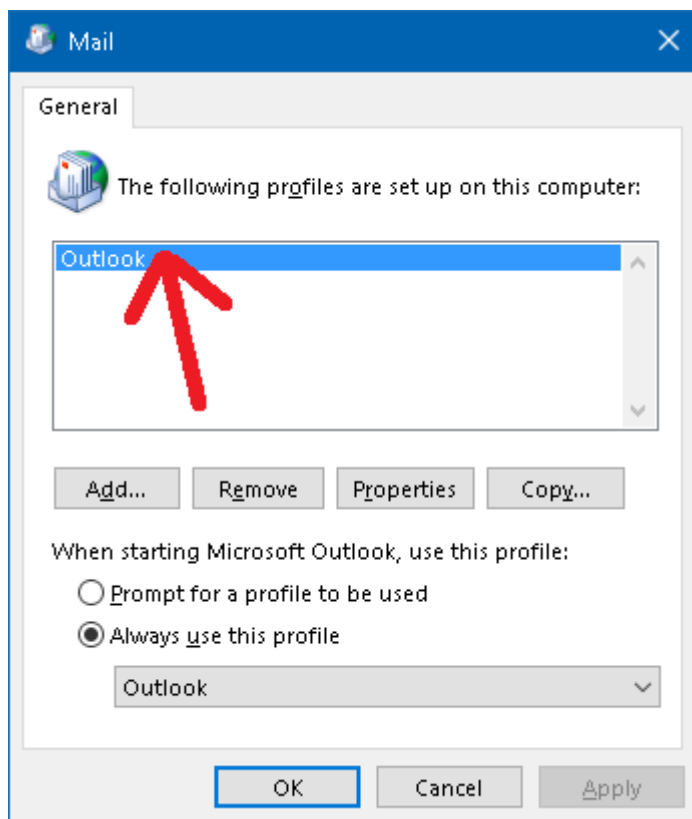
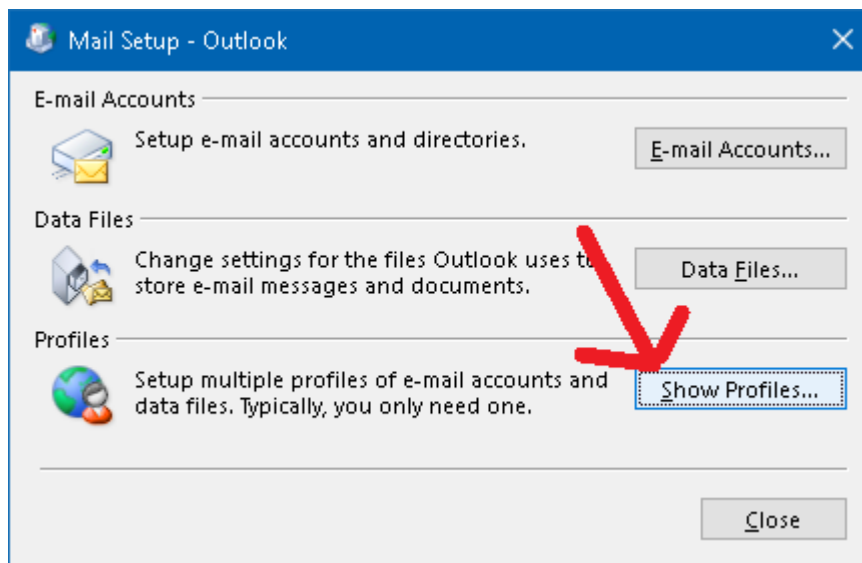
The following are some issues you may encounter with MAPIEx:

a. Failure in <function> function of Blue Prism Extended MAPI Automation. Failed to log onto profile <profile name> : 0x80040111 : MAPI_E_LOGON_FAILED

This is caused when either the profile is not recognized (e.g. the provided profile name is wrong) or when the stored credentials are incorrect. To correct, try the following:

- First, confirm that your password is correct (e.g. it is not storing an old or incorrect password). Open Outlook and confirm you can access your mail that way, re-entering your password if necessary.
- Next, confirm the profile name is correct. Open up Control Panel -> Mail -> Profiles and ensure the profile name being used matches the default profile listed.





b. MAPIEx mail VBO reports compile error

This most commonly means that the MAPIEX VBO cannot find the 32-bit libraries necessary for its operation. MAPIEx is not designed to work with 64-bit systems, so it not be installed in the Blue Prism directory by default on 64-bit Windows. To resolve:

- Edit the MAPIEx VBO from within Blue Prism's Object Studio.
- Select the 'Initialise' tab, and then double-click on the Business Objects Page Information stage (containing the properties for the page) to reveal the properties for this page.

- Select the 'Code Options' tab. Find 'BluePrismMAPIExAutomation.dll' in the 'External References' list and edit this entry to include the full path to the .dll file. e.g. C:\Program Files (x86)\Blue Prism Limited\Blue Prism Automate\BluePrismMAPIExAutomation.dll

c. MAPIEx Operations are Very Slow

This is usually a side effect of the communications overhead with the server. While not strictly a bug, it can frequently be addressed by setting the Outlook profile to Cached mode. Please note that while this solves some problems, it can cause other issues (see below). To turn cached mode on or off (in Outlook 2013):

- Navigate to File -> Account Settings -> Account Settings...
- Select the Email tab
- Select "Change" for the appropriate e-mail account
- Select or deselect the "Use Cached Exchange Mode" checkbox as appropriate.

d. E-Mail Status/Location Not Syncing to Server

This is usually a side effect of the profile being in Cached Mode. Because e-mails are only updated to the server periodically, they can be slow to send, move between folders, or otherwise change status. To turn cached mode on or off (in Outlook 2013):

- Navigate to File -> Account Settings -> Account Settings...
- Select the Email tab
- Select "Change" for the appropriate e-mail account
- Select or deselect the "Use Cached Exchange Mode" checkbox as appropriate.

e. 'Either there is no default e-mail client or the running e-mail client cannot perform the messaging request'

This usually occurs because Microsoft Outlook is not the default e-mail client on the machine. To correct this:

- Navigate to Control Panel -> Mail (32-bit) -> Show Profiles
- Select "E-mail Accounts"
- ensure that MAPIEx is configured to use the default profile and that the names match exactly.
- Use a registry editor to navigate to HKEY_LOCAL_MACHINE\SOFTWARE\Clients\Mail and ensure that the default application listed is Microsoft Outlook.