Quest®

Quest® Client Profile Updating Utility 5.8

Administrator Guide

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IMPORTANT, **NOTE**, **TIP**, **MOBILE**, or **VIDEO**: An information icon indicates supporting information.

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Overview

During migration, Migration Manager for Exchange moves mailboxes from the source Microsoft Exchange server to the target Microsoft Exchange server. Before users can start working with the new target mailbox, their Microsoft Outlook profiles must also be updated.

The **Client Profile Updating Utility (CPUU; legacy name: EMWProf) 5.8** allows you to update these profiles automatically and transparently. The utility is used to update end-user Microsoft Outlook profiles settings, migrate additional features of user mailboxes and finally switch the profiles from the source to the target Exchange server once the user's mailbox is migrated and switched either manually or by the Migration Manager's Mail Agent.

CPUU supports Microsoft Outlook 2010/2013/2016/2019. It can be used in conjunction only with the following products:

- Migration Manager 8.14 or later
- On Demand Migration for Email

TIP: For details how to use CPUU with ODME, see Working with On Demand Migration for Email

Terminology

Throughout this document, the following terms are used:

Source servers: the Exchange servers from which the email data is migrated

Target servers: the servers to which the email data is migrated

Console: the computer on which Migration Manager for Exchange is installed

Hereafter, unless a specific Exchange version is meant, "Exchange" denotes Exchange 2003, Exchange 2007, Exchange 2010, Exchange 2013, Exchange 2016 organizations, servers, mailboxes, etc.

Configuring and Running the Client Profile Updating Utility

To configure CPUU, create one configuration file (.INI) and three batch files for it using the **Client Profile Updating Utility Configuration** wizard. Include the resulting files in the logon script for the domain users. When a user logs on to the network, CPUU starts automatically on his or her workstation with the configuration saved in these files.

NOTE: If the target is Microsoft Office 365, you have to provide all users with their Office 365 passwords before CPUU switches Outlook profiles. Otherwise, the user cannot log on to his/her mailbox and get an access to his/her emails after the switch.

On a workstation, CPUU processes all the Microsoft Outlook user profiles that you selected to be processed when you set up your configuration files. A profile is processed whether or not it is set as the default for Microsoft Outlook. When updating Microsoft Outlook profiles, CPUU looks for a correspondence between the source and target recipients, using the custom attribute populated by the Directory Synchronization Agent.

CAUTION: CPUU stops Microsoft Outlook or other MAPI clients if these applications are running.

Offline Microsoft Outlook profiles are also updated in accordance with the settings you made when you specified in the INI file. CPUU can process either all offline profiles or only the profiles for the remote users whose mailboxes were added to Remote Users Collections. For information about Remote Users Collections, refer to the Migration Manager for Exchange documentation.

Take into account, the following conditions must be met for CPUU to work properly:

- CPUU should have an ability to connect to source and target Exchange server in Online mode. Therefore the online mode profile usage by users must not be disabled. Refer to Microsoft article on how to turn on Cached Exchange Mode for details.
- CPUU requires the Exchange Autodiscover service to be properly configured and run in your Exchange organization.

Supported Configurations

The Client Profile Updating Utility supports the vast majority of client computer configurations. Specifically, all mail clients and operating systems listed below are supported in any valid combinations.

However, only those Exchange Server and Outlook combinations are supported that are also supported by Microsoft. For a list of Outlook versions compatible with your Exchange Server, refer to the Exchange system requirements.

See Client Profile Updating Utility Release Notes document for complete list of supported configurations.

Multiple Exchange Account Processing

CPUU can switch profiles that contain multiple Exchange accounts, but only the primary Exchange accounts are always switched. The primary Exchange account is an account that was first added to the profile (the primary account is not the same as the default account). See Advanced Tuning step of Typical Scenario.

Working with On Demand Migration for Email

CPUU supports updating Outlook profiles for users whose mailboxes have been migrated using On Demand Migration for Email. For detailed information how to configure and use CPUU for this scenario and which

limitations apply, see Updating Outlook Client Profiles in the *On Demand Migration for Email User Guide*.

What the Utility Updates

The Client Profile Updating Utility updates the profile settings, and also finalizes the mailbox migration by migrating additional features of user mailboxes.

IMPORTANT: If you use CPUU with On Demand Migration for Email, review Working with On Demand Migration for Email for the list of supported features and other information.

Additional features are specific custom settings of a particular user mailbox and its environment. Additional features include sets of services, groups of settings, Microsoft Outlook controls, and links to the mailbox objects, public folders, Global Address List, and so on.

Specifically, while updating a profile, the utility also updates the following additional features:

Feature	Details
Additional Mailboxes	Shared Exchange mailboxes added in the user's **Account Settings** as *additional mailboxes*. *When processed:* CPUU updates links to additional mailboxes according to the location of additional mailbox owner (source or target Exchange). *When skipped:* The list of additional mailboxes will be empty. *INI parameter name:* AddBoxes
CONTAB	The Outlook Address Book is created automatically and contains the main **Contacts** folder and other added folders. These contacts are displayed in the Address Book dialog box when clicking **Contacts** in the Address Book list. *When processed:* CPUU updates links to all contact folders in Outlook Address Book *When skipped:* Outlook Address Book will become empty. *INI parameter name:* CONTAB
Contact Members	User's contacts and group contacts in all contact folders or groups. *When processed:* CPUU updates links to GAL users and distribution lists in personal contacts and personal distribution lists for all contact folders located in the mailbox and personal folders (.pst) file. *When skipped:* All contacts in contact folders will be source and some of distribution lists' members may be corrupted and lose links to existing objects. *INI parameter name:* ContactMembers
Delegates	Users granted permissions to receive items and respond on user's behalf specified in **Account Settings | Delegate Access**. *When processed:* CPUU updates list of delegates and delegation settings. *When skipped:* Some of delegation settings may be lost. *INI parameter name:* Delegates

Feature	Details
	NOTE: If a user granted delegate access to other users or shared some folders with them, processing of the user's mailbox as well as mailboxes of users that are granted access need to be completed to re-establish access to the shared resources such as delegated calendars or shared folders.
Folder Lists	A list of recent folders where messages have been previously moved displayed when a message is about to be moved to a folder. *When processed:* CPUU updates links to folders according to their location (source or target Exchange). *When skipped:* The folders list will be empty. *INI parameter name:* MoveToFolder
AutoComplete list (Nicks) files	Contact nicknames displayed when typing into the *To*, *CC* or *BCC* fields. *When processed:* CPUU updates all links to users according to their location (source or target Exchange). *When skipped:* The list will contain links to source users. *INI parameter name:* Nicks
Other User's Folders	List of folders owned by other users that have been opened by the current user. *When processed:* CPUU updates links to other users' folders according to the location of those users (source or target Exchange). *When skipped:* The list of folders will be empty. *INI parameter name:* OtherUsersFolders
Public FAV	Public folders selected as favorite by the user and displayed in the **Favorites** folder of the **Public Folders** tree in Outlook. *When processed:* CPUU updates links to public folders in the Favorites folder of the Public Folders tree. CPUU will not preserve public folder favorites if the mailbox was migrated in a Remote Users Collection and the Outlook profile uses an OST file. *When skipped:* The list of favorite folders will be empty. *INI parameter name:* PublicFav
Rules	User-defined rules that are run by Outlook or Exchange when receiving mail. Note that only enabled rules are processed. *When processed:* CPUU updates all links to users and folders found in enabled rules according to their location (source or target Exchange). *When skipped:* Rules may become corrupted and no longer working. *INI parameter name:* Rules
Send/Receive Settings	Message send and receive settings for accounts from the Outlook profile. *When processed:* CPUU updates all send and receive settings. *When skipped:* Some settings may be lost after switch. *INI parameter name:* SRS
Search Folders	Search Folders created in Outlook.

Feature	Details
	When processed: Search folders are copied to the target mailbox with all their settings. Note that the target search folders are created as not active. To activate a folder, simply click it. *When skipped:* All search folders will become corrupted and no longer working. *INI parameter name:* SearchFolders
Services	Various profile properties including address book settings, folder for the most recently created message moving rule, and folder specified in the "After updating tracking information, move receipt to" option. *When processed:* CPUU updates all links to folders and address books in the address book settings and other settings from source to target ones. *When skipped:* Settings will be reset to default. *INI parameter name:* Services
Shortcuts	Items on the **Shortcuts** pane. *When processed:* CPUU updates links to folders from source to target ones. *When skipped:* The list of shortcuts will be empty. *INI parameter name:* Shortcuts
User Names	User-defined names for PST stores, additional mailboxes and specific folders like the Favorites folder and the All Public Folders folder. *When processed:* CPUU updates names of folders with modified names. *When skipped:* Folder names will be reset to default. *INI parameter name:* UserNames
Favorites	The **Favorites** group located on the **Mail** pane. *When processed:* CPUU preserves order of links to folders, and updates the links from source to target ones. Note that search folders and public folders favorites added to Favorites are not processed. Therefore, they will not appear after the switch. *When skipped:* Most of links available on source will disappear after switch. *INI parameter name:* Favorites
Calendar Pane	Items on the **Calendar** pane. *When processed:* CPUU preserves calendar groups, order of links to calendars, selection of check boxes, and updates links to shared calendars according to the location of calendar owner (source or target Exchange). *When skipped:* Most of links available on source will disappear after switch. *INI parameter name:* Calendar
Contacts Pane	Items on the **Contacts** pane. *When processed:* CPUU preserves folder groups, order of links to contacts, and updates the links from source to target ones. *When skipped:* Most of links available on source will disappear after switch. *INI parameter name:* Contacts
Tasks Pane	Items on the **Tasks** pane.

Feature	Details
	When processed: CPUU preserves folder groups, order of links to tasks, and updates the links from source to target ones. *When skipped:* Most of links available on source will disappear after switch. *INI parameter name:* Tasks
Notes Pane	Items on the **Notes** pane. *When processed:* CPUU preserves folder groups, order of links to notes, and updates the links from source to target ones. *When skipped:* Most of links available on source will disappear after switch. *INI parameter name:* Notes
Journal Pane	Items on the **Journal** pane. *When processed:* CPUU preserves folder groups, order of links to journals, and updates the links from source to target ones. *When skipped:* Most of links available on source will disappear after switch. *INI parameter name:* Journal

CPUU also clears the junk e-mail settings if the **Reset Outlook junk e-mail options for target mailbox** option is selected in the Configuration wizard. Otherwise, the settings will remain unchanged and may not work properly for the target mailbox.

IMPORTANT:
For the Favorites, Calendar, Contacts, Tasks, Notes and Journal features note the following:

- To process shared folders of other users in a profile, accounts under which CPUU connects to source and target mailboxes must have the **Full Access** permission on every mailbox in the source and target organizations, respectively.
- To have shared folder contents available after switch, ensure that Autodiscover is configured for the target user.

Modes

The Client Profile Updating Utility can work in the following modes:

- Update Microsoft Outlook profiles
- Roll back changes made by CPUU to the Microsoft Outlook profiles
- Clean up information saved by CPUU during update

The **Client Profile Updating Utility Configuration** wizard can create three batch files and one configuration file:

- **CPUU_Update.bat** to update all or specified Microsoft Outlook profiles
- **CPUU_Rollback.bat** to roll back changes made by CPUU for all or specified Microsoft Outlook profiles
- **CPUU_Cleanup.bat** to clean up information saved by CPUU during update
- **CPUU.ini**

All batch files contain commands that launch Client Profile Updating Utility in corresponding mode, and a specific script that detects whether Microsoft Outlook is 32-bit or 64-bit.

Running CPUU from the command line

You can run CPUU in particular mode from the command line using the appropriate command-line parameters. For details, see the CPUU Parameters topic.

Update

This option allows you to perform the direct profile switch without using a cache file. CPUU updates all the profile settings associated with the Exchange server. When updating Microsoft Outlook profiles, the utility looks for correspondence between the source and target recipients.

Rollback

The changes made by CPUU to the Microsoft Outlook profiles can be rolled back. This mode should be used for advanced troubleshooting in the following situations:

- If any issues occurred while processing the profiles by CPUU.
- If a user experiences problems while working with the new Exchange mailbox after the switch. In this case, first switch the mailbox back to the source Exchange server, and then roll back the changes made to its profiles.

Cleanup

All the auxiliary and backup information saved by CPUU during update can be cleaned up. This mode should be selected only after all the profiles have been successfully updated and no rollback is required. The rollback operation will be impossible after CPUU cleans up the backup information.

Usage

By default, the utility is installed in the **%Program Files%\Quest\Client Profile Updating Utility** folder.

The **Client Profile Updating Utility Configuration** wizard is always installed in the same folder as Client Profile Updating Utility.

It is recommended that all the preparations needed for updating client mailbox profiles be made before the mailboxes are switched to the target Exchange server by the Mail Agent.

For more details, see the related topics:

- Typical Scenario
- Office 365 to Office 365 migration scenario with domain name transfer
- Updating Microsoft Outlook Offline Profiles (legacy agents only)

Required Permissions

The following permissions are required for accounts used to perform typical Client Profile Updating Utility tasks:

- **Full Access** on every mailbox in the source and target organizations to process profiles. See Specific case considerations for linked mailbox, shared folders, migration to Microsoft Office 365, and for tenant to tenant migration with domain name transfer for specific cases.
- **Send As** on every mailbox for administrative account in case you are planning to configure notifications.

Office 365

To grant **Full Access** and **Send As** permissions to to service account "CPUUAdmin" for all mailboxes on your Office 365 tenant you can use `Add-MailboxPermission` and `Add-RecipientPermission` PowerShell cmdlets:

```
$credential = Get-Credential

$exchangeSession = New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri "https://outlook.office365.com/powershell-liveid/" -Credential $credential -Authentication "Basic" -AllowRedirection

Import-PSSession $exchangeSession -DisableNameChecking

Get-Mailbox | Add-MailboxPermission -User "CPUUAdmin" -AccessRights FullAccess -InheritanceType All -AutoMapping $false

Get-Mailbox | Add-RecipientPermission -Trustee "CPUUAdmin" -AccessRights SendAs
```

On-premises environment

To grant **Full Access** and **Send As** permissions to service account "CPUUAdmin" for all mailboxes in your environment you can use `Add-MailboxPermission` and `Add-ADPermission powershell` PowerShell cmdlets.

```
Get-Mailbox | Add-MailboxPermission -User "CPUUAdmin" -AccessRights FullAccess -InheritanceType All -AutoMapping $false
```

```
Get-Mailbox | Add-ADPermission -User "CPUUAdmin" -ExtendedRights "Send As"
```

> **TIP:** To avoid any access issues for specified administrative account, it is recommended to create a source and a target Outlook profile for **one** mailbox, and then, in Outlook, log on to these profiles using this administrative account. In case the selected account has not enough access permission, Client Profile Updating Utility cannot update the profiles.

Full Access permission allows to sign in to all mailboxes by using Outlook. For more information, see the Manage permissions for recipients article. However, **Full Access** permission do not let the service account to send notifications from the owner of the mailbox. **Send As** permission should be granted separately in case you are planned to send notifications from the owner of the mailbox.

Specific case considerations

Shared folders

In case **Use the currently logged in user** or **Prompt for credentials** options are selected, to process shared folders of other users in a profile shared folders, accounts under which CPUU connects to source and target mailboxes must have the **Full Access** permission on the mailboxes of other users in the source and target organizations, respectively.

Linked mailboxes

In case you have linked mailbox in target and the **Source credentials will be used for access to target mailbox** option is selected, the source account should have **Full Access** permission on the target mailbox.

Migration to Microsoft Office 365

For migration scenarios to Microsoft Office 365, the **Use the currently logged in user** option is not supported. Use the **Prompt for credentials** option to specify the user account under which CPUU will run. That also includes configurations with Single Sign-On (SSO) enabled, where sign on to Microsoft Office 365 under account of the logged-in user without prompting user credentials is not supported due to Microsoft Outlook restrictions. Microsoft Outlook cannot log on to the Office 365 mailbox without providing account credentials even if the federated user account is used. For more details, see the following article: https://technet.microsoft.com/en-us/library/office-365-user-account-management.aspx .

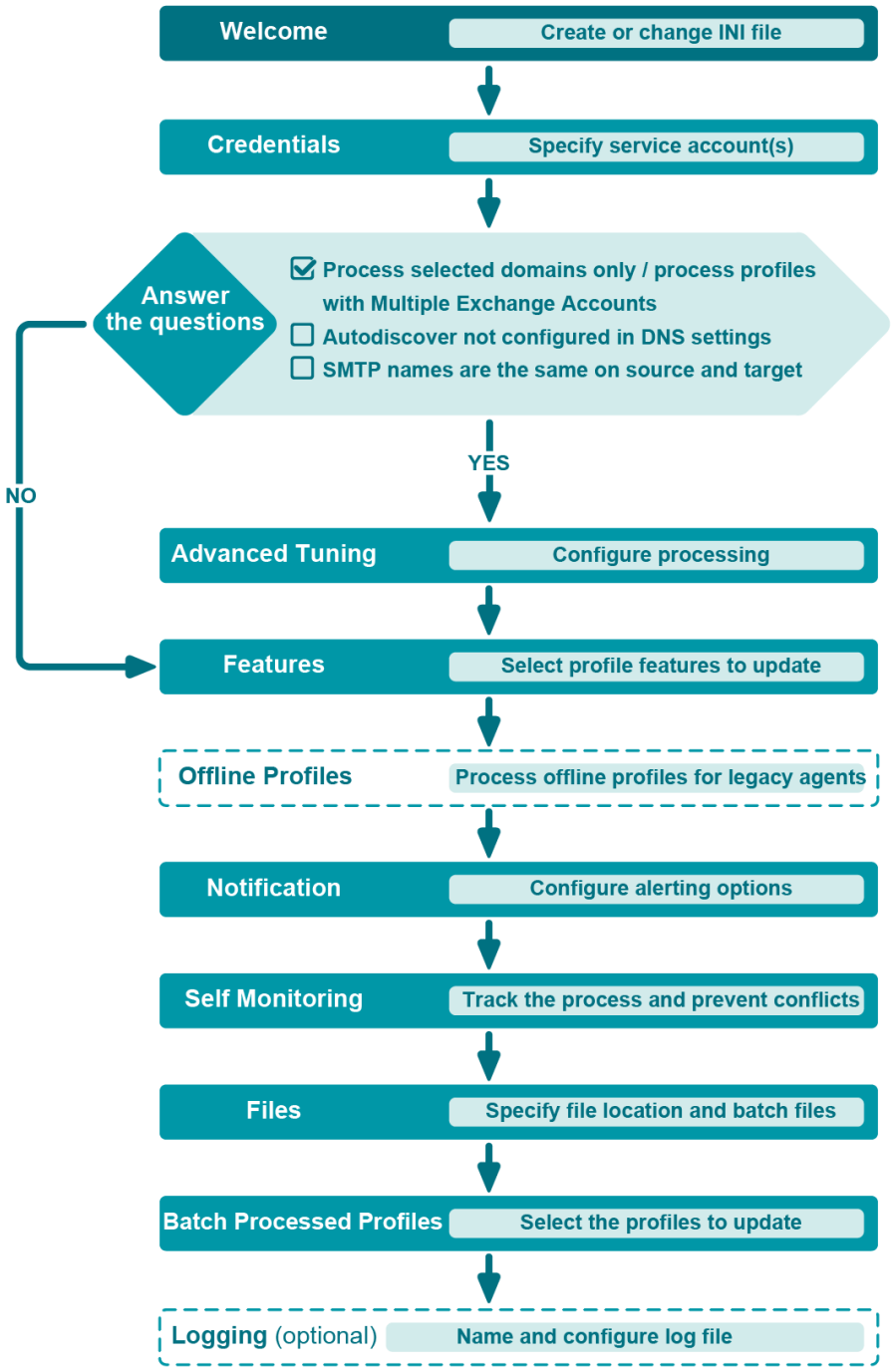
Office 365 to Office 365 (tenant to tenant)migration scenario with domain name transfer

To configure CPUU in case On Demand Migration for Email is used to migrate the content of mailboxes to the target tenant., refer to Updating Outlook Client Profiles in the *On Demand Migration for Email User Guide* and to Tenant to tenant migration scenario with domain name transfer in this guide. You can make permissions more granular as described in How to Limit Account Rights.

Typical Scenario

It is recommended that all the preparations needed for updating client mailbox profiles be made before the mailboxes are switched to the target Exchange server by the Mail Agent. The basic workflow for switching the

mailboxes and updating client profiles is described below:



To configure the Client Profile Updating Utility to process the Microsoft Outlook profiles, perform the following steps:

Step 1. Run the Client Profile Updating Utility Configuration wizard

1. On the **Welcome** step, select whether you want to create a new configuration file or load an existing one. Typical scenario workflow is not intended for tenant to tenant migration in case you want to keep vanity domain name. If this is the case, select **O365 to O365 with domain name transfer (ODME only - not applicable for MMEX)** option. See Tenant to tenant migration scenario with domain name transfer for details.
2. On the **Credentials** step, specify an account under which CPUU will log on to the source and target mailboxes. Required permissions for the account are described in Required Permissions.The following options are available on this step:
   - **Use the currently logged in user**

     The account of the user that log on to the workstation where CPUU will run. Please note this option may not be supported for Office 365 environments.
   - **Prompt for credentials**

     Force CPUU to prompt the user for credentials to access the source and target mailboxes. In case you have linked mailbox in target you can select **Source credentials will be used for access to target mailbox** check box to avoid multiple CPUU credential requests.
   - **Manually provide credentials**

     This option lets you specify credential to access the source and target mailboxes, or two different credential: one for the source mailbox and another for the target mailbox (if trust relationships are not established between the source and target domains) in the INI file. It is recommended to select safe restricted options here. For more details refer to Encryption Modes.
3. On the **Advanced Tuning** step, you provide information that is necessary for the successful profile processing in any of the following specific cases:
   a. In case you want to limit processing scope or there are profiles with multiple Exchange accounts, **Process profiles from specified domains only (required for profiles with multiple Exchange accounts)** option should be selected. In this case you should provide list of SMTP domain names for all user and public folder SMTP names that should be processed. For example, `domain.local`.
   b. To ensure Autodiscover service access in environments, where DNS is not configured, it is recommended to select **Manually configure Autodiscover service URL(s) in case it is not properly configured in DNS settings**. In this case you should provide Autodiscover service URL for source, for target, or both.
   c. To process environments where domain part of SMTP addresses match, select **Process profiles in case of same source and target domain parts of SMTP addresses**. In this case you should provide list of SMTP domain names for all user and public folder SMTP names that should be processed and both Autodiscover Service URLs.

   In case **Test Autodiscover service availability when Next is clicked** option is selected, the wizard verify that the specified Autodiscover services are available on the provided URLs. Wizard does not check the credentials are valid to use these services. This option is optional. Do not select this option for the case the Autodiscover services are not available at the moment.

4. On the **Features** step, select the profile features you want to be updated.
5. Use the **Offline Profiles** step if you want CPUU to process offline Outlook profile. This step is required for legacy agents only. Select whether the offline profiles should be processed always or only when the OST file can be kept. For more information about processing offline profiles, please refer to the Updating Microsoft Outlook Offline Profiles topic.
6. If you want CPUU to display a verbose progress bar to user, select the **Display progress bar and warnings to users** check box on the **Notification** step. Note that the most critical warnings will be displayed even if the check box is not selected. For example, if you force CPUU to prompt for credentials, the dialog box for entering credentials will be displayed. On the **Notification** step, you also can specify whether you want to receive e-mail notifications about the profile updating progress.:
   - Select whether a notification should be send each time a profile is updated or only when CPUU could not update a profile.
   - Specify an e-mail address or addresses to which the notifications should be sent.
   - Select what information should be attached to the notification. You can select to attach a summary or a full log file. If you choose not to include any attachments, the minimum necessary information will still be included in the subject and body of the notification message (if you do not change their default templates). By default the subject and the body of the notification message contain the following information:

   ```
   Subject: %R: Profile %P on computer %H
   ```

   ```
   Body: The mail client profile %P for user %U on computer %H has been processed by Client Profile Updating Utility (CPUU), and was %R. The profile was processed at %T, %D. See the CPUU log file for details.
   ```

   Variables stand for the following information:

Variable	Meaning
%R	UPDATED or NOT UPDATED
%P	Name of the profile
%H	Name of the computer where the profile was updated
%U	Name of the user whose profile was updated
%T	Time of the profile update
%D	Date of the profile update

   For more information about the notification message format, refer to the Technical Reference topic.
7. On the **Self Monitoring** step, you can specify troubleshooting and conflict prevention options.
8. On the **Files** step, you can select the batch files you want to create (**CPUU_Update.bat, CPUU_Rollback.bat, CPUU_Cleanup.bat**) and specify the location of the configuration file (**CPUU.ini**) with the parameters you have supplied. These files will be used to start CPUU in order to update profiles, roll back changes made by CPUU and clean up information saved by CPUU.
9. On the **Batch Processed Profiles** step, select the profiles to be updated by CPUU using specified batch files. You can choose to process all profiles, select particular profiles or update only the default profile. This step is disabled if **CPUU_Update.bat** and **CPUU_Rollback.bat** are not created on the **Files** step.
10. On the **Logging** step, you can specify a name for the CPUU log file that will help you to find required information during troubleshooting.

This step is disabled if you do not create batch files for the utility on the **Files** step.

The default name of the log file is **CPUU_#h_#d_#t.log**, where:

- **#h** - name of a computer
- **#d** - date when the file was created
- **#t** - time when the file was created

Alternatively, you can use the existing environment variable values to form the CPUU log file name. For example, you can add the logged-in username to the name of the log file by typing the following expression in the Log file box:

%username%_CPUU.log

The %username% parameter will be substituted with the real user name in whose security context CPUU starts.

It is also recommended that you configure CPUU to put log files to a network share where these files can be reached by administrators. In this case, use the UNC path syntax to specify the log file name, for example:

\\Servername\Sharename\%username%_CPUU.log

Note that users must be granted at least Write permission to put CPUU log files to the share.

IMPORTANT: If a connection between user computer and network share is slow, then that can significantly increase profile processing time. For more details, see Dealing with Slow Connection while Updating Profiles

Adding Files to the Logon Script

- Add all the Client Profile Updating Utility files to the folder that is used by the logon script. All the files are located in the **%Program Files%\Quest\Client Profile Updating Utility** folder by default, as follows:
  - **ClientProfileUpdatingUtility.exe**
  - **ClientProfileUpdatingUtility_x64.exe**
  - **DlgHookHandler.dll**
  - **DlgHookHandler_x64.dll**
  - **dbghelp.dll**
  - **wldap32.dll**
  - An INI file created by the wizard (**CPUU.ini** by default)
  - A BAT file created by the wizard for updating profiles (**CPUU_Update.bat** by default)
- Include **CPUU_Update.bat** in the logon script.

  Then, as soon as the mailboxes are switched and the users log on to their network, the Client Profile Updating Utility will start processing their profiles.

Step 2. Switch Mailboxes

As soon as CPUU is configured and ready to be started, you can start switching the source mailboxes to the target Exchange servers. For more information, please refer to the relevant Migration Manager for Exchange documentation.

Step 3. Update Profiles

As soon as the mailboxes are switched, CPUU will start updating user profiles. Wait while all profiles are updated.

Step 4. Perform Cleanup

After the migration has been completed, all profiles have been successfully updated, and you are absolutely sure that no rollback is required, you can run **CPUU_Cleanup.bat** that was created together with **CPUU_Update.bat**.

Dealing with Same Source and Target SMTP Addresses

If users or public folders have the same source and target SMTP addresses, Autodiscover may return wrong mailbox configuration. To process the profile, CPUU requires additional configuration. Select **Process profiles in case of same source and target domain parts of SMTP addresses** option on **Advanced Tuning** step of the configuration wizard to provide required data. See Typical Scenariofor details.

NOTE: In case you want to transfer the vanity domain name from one Microsoft Office 365 tenant to another Microsoft Office 365 tenant see Tenant to tenant migration scenario with domain name transfer below.

After CPUU successfully finishes profile processing, Outlook configuration will point to target Autodiscover service URL. Otherwise, it will point to source Autodiscover service URL.

IMPORTANT: If the user has multiple Exchange profiles for the same mailbox, processing a single profile with CPUU might result in other ones to be automatically reconfigured by Outlook Autodiscover. The reconfiguration only happens when an unprocessed profile is opened in Outlook. For further details on Outlook Autodiscover, refer to outlook-2016-implementation-of-autodiscover.

Encryption Modes

If you manually specify an account for profile update, the credentials are encrypted and stored in CPUU configuration file (**CPUU.ini**). To ensure that the stored credentials are not compromised, you can specify the conditions under which they can be decrypted:

- **Restricted to the current user and host** (intended for SwitchResMb)

  Credentials can only be decrypted for profile processing only under logon sessions of the user who ran Configuration Wizard and created CPUU configuration file and only on the host where CPUU configuration file has been created.

NOTE: The only exception is a roaming user profile – in this case, the credentials can be decrypted for profile processing on all hosts where the roaming profile is valid.

- **Restricted to the current host** (intended for SwitchResMb)

Credentials can be decrypted for profile processing under logon session of any users but only on the host where CPUU configuration file has been created.

- **Unrestricted (not recommended, security risks should be reviewed)**

  Credentials can be decrypted for profile processing without any restrictions by user or by host where CPUU configuration file has been created. While we have implemented the reliable encryption algorithm, it is theoretically possible to reverse-engineer CPUU code and use the knowledge to decrypt credentials data.

CAUTION: Never use this mode in production environment and never use it in conjunction with administrative credentials! It is recommended for isolated test lab.

TIP: Restricted to the current host is the most suitable encryption mode for simultaneous mailbox processing with SwitchResMB on same host under different logon sessions.

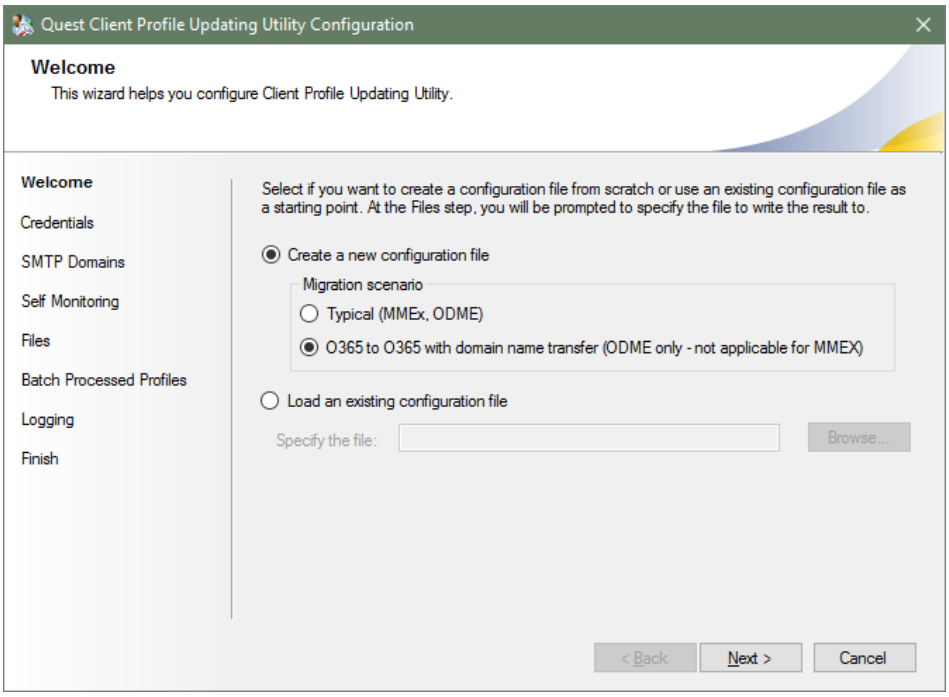
Tenant to tenant migration scenario with domain name transfer

1. Use On Demand Migration for Email to migrate the content of mailboxes to the target tenant.
   For detailed information on CPUU configuration, usage, and limitations, see Updating Outlook Client Profiles in the *On Demand Migration for Email User Guide*.
2. Create a temporary service mailbox in each source and target tenants and provide credentials for them. These accounts will be used to process profiles, for example fetching Autodiscover information from source and target tenants. The less rights these accounts have, the safer. For more details on limiting account rights, see How to Limit Account Rights.
3. Use CPUU configuration wizard to create **CPUU.ini** file as described below.
4. Set the group policy for source domain users to start CPUU when user logs on to the computer.
5. Transfer the domain name to the target tenant. After this moment, the users cannot use their existing Outlook profiles without processing them by CPUU.

   NOTE: After profile processing it might take some time for Outlook to resume the normal and expected behavior.
6. After all user profiles are switched to the target, remove the group policy set in Step 4.

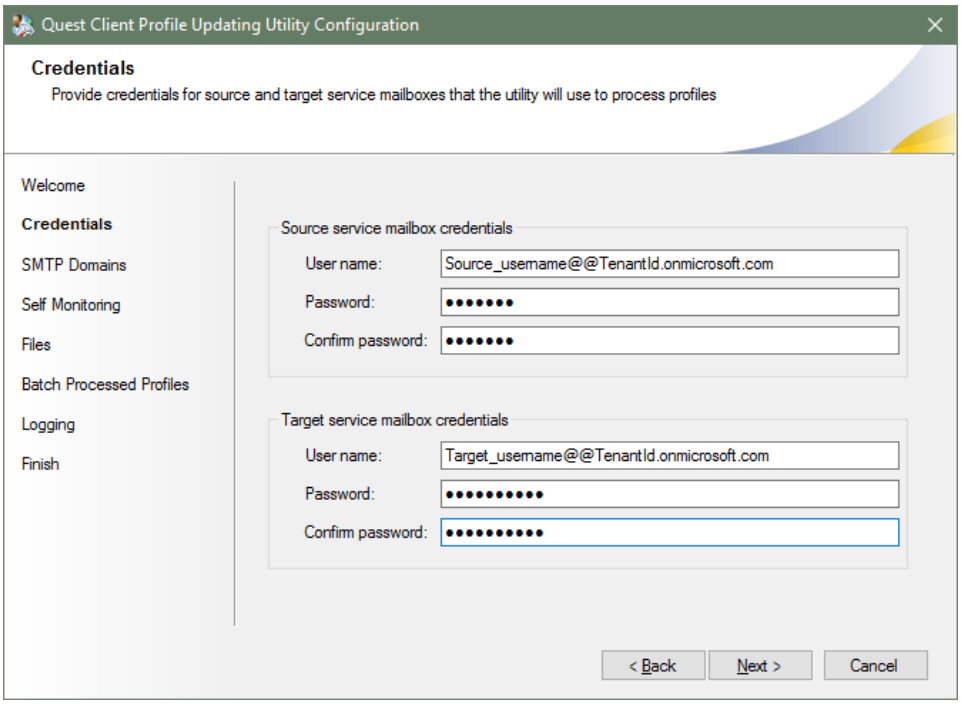
Creating new CPUU.ini file for tenant to tenant migration scenario with domain name transfer

1. Start CPUU configuration wizard. Select **Create a new configuration file**.
2. Select **O365 to O365 with domain name transfer (ODME only - not applicable for MMEX)** option. Click **Next**.

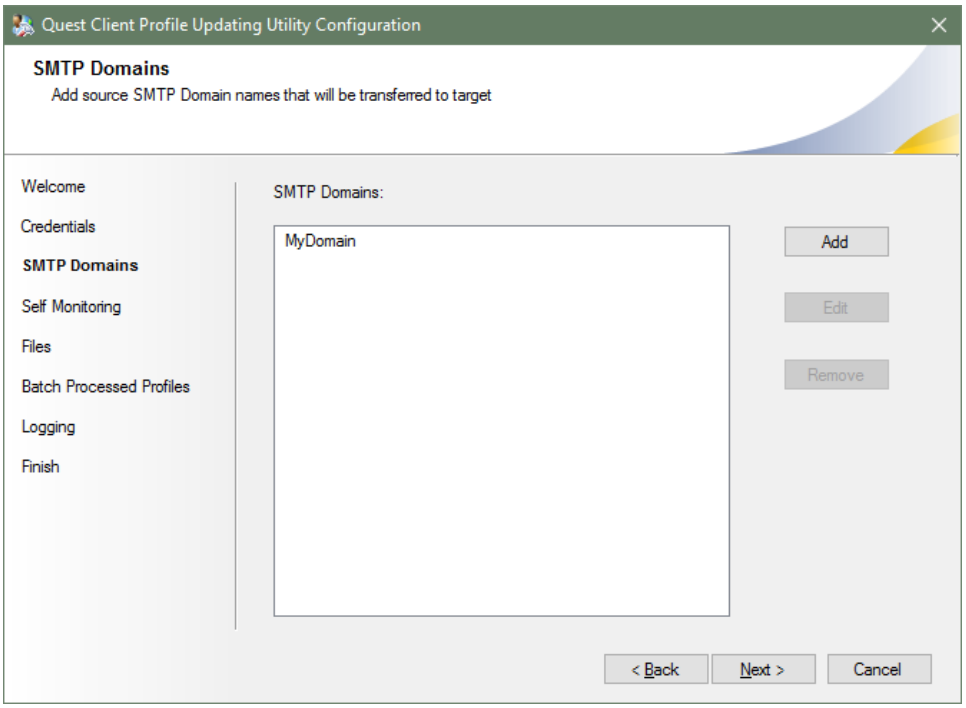


3. Provide credentials for service mailboxes.

IMPORTANT: User names should follow this syntax: <user_name>@TenantId.onmicrosoft.com.



4. Add domain names that will be kept after migration. Only profiles with email addresses from these domains will be processed by CPUU. Click **Next** to proceed as described in



5. Configure Self Monitoring, location of configuration file, batch file set, batch processed profile set, and logging as described in Typical Scenario

How to Limit Account Rights

Accounts for temporary service mailboxes does not require many access rights for CPUU to function properly. We recommend limiting the account rights using the following PowerShell commands.

NOTE: Redefine **$user** variable with the account's user name or email address.

```
$credential = Get-Credential

$exchangeSession = New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri "https://outlook.office365.com/powershell-liveid/" -Credential $credential -Authentication "Basic" -AllowRedirection

Import-PSSession $exchangeSession -DisableNameChecking

$user = "UserName"
```

Table 1: Limiting account rights

Limitation	Command
Disable access to remote PowerShell	`Set-User $user -RemotePowerShellEnabled $false`
Disable Exchange ActiveSync for the mailbox	`Set-CASMailbox $user -ActiveSyncEnabled $false`
Disable access to the mailbox by using Outlook on the	`Set-CASMailbox $user -OWAEnabled`

Limitation	Command
web	`$false`
Disable access to the mailbox by using Outlook on the web for devices	`Set-CASMailbox $user -OWAforDevicesEnabled $false`
Disable access to the mailbox by using POP3 clients	`Set-CASMailbox $user -PopEnabled $false`
Disable access to the mailbox by using IMAP4 clients	`Set-CASMailbox $user -ImapEnabled $false`
Disable access to the mailbox by using MAPI clients	`Set-CASMailbox $user -MAPIEnabled $false`

For more information see *Client access cmdlets in Exchange Online* article in Microsoft TechNet.

Using CPUU for Outlook 2016/2019

Also consider that by default Outlook in the first place uses Autodiscover service not from the domain specified in an email address but from the domain where a computer with Outlook is located. This behavior may prevent finding a corresponding mailbox at target in case you migrated the mailbox using Migration Manager for Exchange. To resolve this problem CPUU automatically disables Autodiscover SCP lookup for Outlook 2016/2019 by adding the **ExcludeSCPLookup** value to the **Autodiscover** registry subkey on the computer where Outlook is installed. That ensures Outlook will use Autodiscover service from the target domain instead of domain where the computer is located.

TIP: For details on the **Autodiscover** registry subkey, see https://support.microsoft.com/en-us/help/3211279/outlook-2016-implementation-of-autodiscover.

IMPORTANT: The Autodiscover SCP lookup disablement affects all Outlook profiles for the logged on user account.

If you migrated mailbox using On Demand Migration for Email then it is recommended to turn off that CPUU behavior. For that specify the `ExcludeSCPLookupNever` parameter in **Update.bat**. For more information on this parameter, see Management Parameters.

Updating Microsoft Outlook Offline Profiles

IMPORTANT: The information in this section is relevant only for migrations performed using legacy agents in Migration Manager for Exchange. For mailboxes, migrated in ODME or using MAgE in Migration Manager for Exchange, OST files cannot be preserved.

A widely-used Microsoft Outlook feature is offline access to a user's mailbox folders. The offline folders (OST) file is stored on a user's computer and keeps a local replica of the corresponding folders in the user's Exchange mailbox. In this document, users with offline folder (OST) files are referred to as remote users.

Because each OST file is associated with only one Exchange mailbox and cannot be used with any other mailbox, a remote user cannot continue to use the same OST file with the new mailbox after the migration. Therefore, the Migration Manager for Exchange Mail Agent recreates the target Exchange mailboxes so that the CPUU can keep the source mailbox OST file and assign it to the target mailbox profile.

The typical and recommended procedure for updating Microsoft Outlook offline profiles is as follows

1. Decide for which remote users the Microsoft Outlook offline profiles should be updated.
2. Group the mailboxes of those remote users into one or more Remote Users Collections.

NOTE: For more information about Remote Users Collections, refer to Migration Manager for Exchange User Guide.

3. Schedule the Remote Users Collection to be processed during the night or some other time when the users do not use their mailboxes.
4. Wait until the Mail Agent switches the Remote Users Collections. While processing a Remote Users Collection, the Mail Agent recreates the target Exchange mailboxes corresponding to the source mailboxes included in the collection and puts a hidden recreate message into each of the source mailboxes. This message will be then used by CPUU.
5. Run the **Client Profile Updating Utility Configuration** wizard.
6. Select the **Create a new configuration file** option on the **Welcome** page of the wizard to create a configuration batch file.
7. Specify the account under which CPUU will run.
8. Instruct CPUU to update offline profiles when possible to keep the OST files.
9. Supply other settings required for running CPUU. For more information, refer to the Typical Scenario topic.
10. Click **Finish**.
11. The wizard will create the BAT and INI files with the parameters you specified. These files will be used to start CPUU in order to update profiles. Include these files in the remote users' logon scripts.
12. CPUU will start updating offline profiles as soon as the mailboxes of the Remote Users Collection are switched to the target Exchange. To determine that the mailboxes are switched, CPUU uses the switch message. To determine that the mailboxes were successfully recreated and the OST file can be kept, CPUU uses the recreate message. Both messages are put to the mailbox by the Mail Agent.

NOTE: The switch message is a hidden message that contains the **Legacy Exchange DN** of the target Exchange server and of the user's new mailbox. If there is no switch message in the mailbox, CPUU will log off from the mailbox and will stop processing the profile.

When configuring CPUU, you can also select the following options for updating offline profiles:

1. **Never update offline profiles** – The offline profiles will be skipped and the users will have to recreate their profiles manually.
2. **Always update offline profiles** – If you select this option, you should be aware of the risk of data loss for those remote users whose target mailboxes were not prepared for migration by the Mail Agent when it processed them within the Remote Users Collections.

Updating Resource Mailboxes

Resource mailboxes are mailboxes that represent company resources you can book (such as conference rooms and equipment).

Since resource mailboxes are used only to book resources, normally no one logs on to them and therefore no Outlook profiles are created for them.

However, when migrating resource mailboxes, not all settings you configured in the source environment are migrated to the target by the agents. These settings can be updated by CPUU only after the mailbox is migrated. CPUU, however, requires Outlook profile to exist in order to update mailbox settings. If the number of resource mailboxes is large, it can be a challenge to create an Outlook profile for each resource mailbox manually.

The **Switch Resource Mailboxes** utility (**SwitchResMb.exe**) is a complementary utility to CPUU designed to help update resource mailboxes. With the help of **SwitchResMb.exe** you can update resource mailboxes in bulk without manually creating Outlook profiles. The **SwitchResMB.exe** utility creates temporary MAPI profiles for CPUU and then deletes them.

CAUTION: It is recommended to switch and process the resource mailboxes after the user mailboxes are already switched (that is, when the users log on to the target mailboxes).

TIP: In some cases Switch Resource Mailboxes can be also used for processing user mailboxes. For more information, see *Processing User Mailboxes with SwitchResMB and CPUU* in Dealing with Slow Connection while Updating Profiles.

SwitchResMb System Requirements
Using the Utility

SwitchResMb System Requirements

SwitchResMb.exe is installed along with CPUU and located in the CPUU installation folder.

IMPORTANT: SwitchResMb utility does does not support profile processing in case of Office 365 tenant as a source.

The account used to run the utility must have permissions to log on to the source mailboxes that are being switched.

The following files are required for SwitchResMb.exe to run:

- **ClientProfileUpdatingUtility.exe** – main CPUU executable file for 32-bit platforms.

CAUTION: The Switch Resource Mailboxes utility cannot run together with 64-bit editions of Microsoft Outlook, so it does not work with ClientProfileUpdatingUtility_x64.exe.

- **CPUU.ini**– A file that contains configuration parameters for **ClientProfileUpdatingUtility.exe**.
- **DlgHookHandler.dll** – DLL file that is installed by the CPUU setup.

- A file that contains configuration parameters for **SwitchResMb.exe** and the list of resource mailboxes to be updated. This file must be created manually, as described in the Using the Utility topic.

Using the Utility

Before starting the Switch Resource Mailboxes utility, you should take the following steps:

1. Create the configuration file according to your source and target environment. The format of the configuration file is described in SwitchResMB.ini Parameters

> **TIP:** To create or change switch message for mailboxes perform the following:
>
> In case Microsoft Outlook 2010 / 2013 and in case Microsoft Outlook 2016/2019 the section TargetMailboxesSMTP is empty or not specified, you need to create a new configuration file in the CPUU installation folder and to verify that the account specified by `DCAccount` parameter in the configuration file has permission to read source Active Directory information. To encrypt the password that this account use to connect to the source domain controller, run the following command line in the CPUU installation folder:
>
> `SwitchResMB.exe <configuration file name> <password for domain controller account>`
>
> The encrypted password will be saved to the `DCPassword` parameter of configuration file.
>
> **CAUTION:** Password encryption is necessary in Microsoft Outlook environment and should be completed before starting the utility.

2. Create a configuration file for Client Profile Updating Utility (CPUU.ini) in the CPUU installation folder. It is recommended to edit **CPUU.ini** as described in the Recommended Values for the CPUU.ini Parameters topic.
3. Run the Switch Resource Mailboxes utility using the following command-line:

```
SwitchResMB.exe SwitchResMB.ini > PathToSwitchResMB.log
```

Parameters:

- **SwitchResMB.ini** – the path to the configuration file
- **PathToSwitchResMB.log** – The path to the log file that the utility will create. If this parameter is not specified, no log file will be created.

Only the configuration file parameter is required.

SwitchResMB.ini Parameters

The configuration file should contain the following sections and parameters:

Section [Settings]

This section is mandatory.

Parameter	Details
CPUUCmdLine	Command line for **ClientProfileUpdatingUtility.exe**. *Required:* Yes

Parameter	Details
	Value: string (can be empty)
SrcExchServer	The source Exchange server name. The server name that is specified in Microsoft Outlook during a profile creation. Its format depends on source Exchange Server version: • Exchange 2010 or lower: FQDN format • Exchange 2013: Mailbox GUID, @ symbol, and the domain part of the user's primary SMTP address (<Mailbox GUID>@<Domain Part>) *Required:* Yes *Value:* string (cannot be empty for Microsoft Outlook 2010/2013, but for Outlook 2016/2019 should be empty)
LogonNetworkSecurityNegotiate	Specifies whether source mailboxes use the **Negotiate authentication** method as a logon network security. The authentication method is specified in Microsoft Outlook during a profile creation. *Required:* No *Value:* 1 or 0
LogonNetworkSecurityWinnt	Specifies whether source mailboxes use the **Password authentication (NTLM)** method as a logon network security. The authentication method is specified in Microsoft Outlook during a profile creation. *Required:* No *Value:* 1 or 0
LogonNetworkSecurityAnonymous	Specifies whether source mailboxes use the **Anonymous Authentication** method as a logon network security. The authentication method is specified in Microsoft Outlook during a profile creation. *Required:* No *Value:* 1 or 0
LogonNetworkSecurityKerberos	Specifies whether source mailboxes use the **Kerberos Password** authentication method as a logon network security. The authentication method is specified in Microsoft Outlook during a profile creation. *Required:* No *Value:* 1 or 0
LogonNetworkSecuritySmartCard	Specifies whether source mailboxes use the **Insert a smart card** authentication method as a logon network security. The authentication method is specified in Microsoft Outlook during a profile creation. *Required:* No *Value:* 1 or 0
LeaveTemporaryProfiles	Specifies whether temporary MAPI profiles created by SwitchResMB utility for CPUU are deleted after processing. By default, the temporary

Parameter	Details
	profiles will be deleted after processing. If **LeaveTemporaryProfiles** is specified, temporary profiles will remain and can be used for troubleshooting purposes. Temporary profile name is like the following: {<random GUID value>}. To troubleshoot, open relevant temporary target profile in the Mail Control Panel applet, check profile settings to determine which prevent proper mailbox content updating, and change **CPUU.ini** or **SwitchResMB.ini** to avoid the issue. *Required:* No *Value:* 1 or 0

Section [AD]

This section is optional and can be used in case of switch message creating or changing to retrieve additional information.

Parameter	Details
DCName	The source domain controller name. *Required:* Yes *Value:* String (cannot be empty)
DCAccount	The account used to connect to the source domain controller. *Required:* Yes *Value:* String (cannot be empty)
DCPassword	The password used to connect to the source domain controller. *Required:* Yes *Value:* String (cannot be empty)

Section [RPCOverHTTP]

This section is mandatory in case of migration from Exchange 2013 or higher with Microsoft Outlook 2010 (earlier than 14.0.7159.5000, October 13, 2015, update for Outlook 2010 (KB3085604)), or with Microsoft Outlook 2013 (earlier than 15.0.4779.1001, December 8, 2015, update for Outlook 2013 (KB3114349))

.

Parameter	Details
ConnectUsingHTTP	Specifies whether to use the RPC over HTTP setting for creation of source mailboxes. *Required:* Yes *Value:* 1 or 0
ProxyServer	Specifies source RPC proxy server which is specified in s in Microsoft Outlook during a profile creation. *Required:* Yes *Value:* String (cannot be empty)

Parameter	Details
PrincipalName	The principal name for proxy server which is specified in **Exchange Proxy Settings** in Microsoft Outlook during a profile creation. *Required:* Yes *Value:* String (can be empty)
SSLOnly	Specifies whether to use the **Connect using SSL only** option which is specified in **Exchange Proxy Settings** in Microsoft Outlook during a profile creation. *Required:* Yes *Value:* 1 or 0
MutualAuth	Specifies whether to use the **Mutually authenticate the session when connecting with SSL** option which is specified in **Exchange Proxy Settings** in Microsoft Outlook during a profile creation. *Required:* Yes *Value:* 1 or 0
HTTPFirstOnFast	Specifies whether to use the **On fast networks, connect using HTTP first, then connect using TCP/IP** option which is specified in **Exchange Proxy Settings** in Microsoft Outlook during a profile creation. *Required:* Yes *Value:* 1 or 0
HTTPFirstOnSlow	Specifies whether to use the **On slow networks, connect using HTTP first, then connect using TCP/IP** option which is specified in Exchange Proxy Settings in Microsoft Outlook during a profile creation. *Required:* Yes *Value:* 1 or 0
AuthNtlm	Specifies whether to use the **NTLM Authentication** method for connecting to proxy server. It is specified in the page **Exchange Proxy Settings** in Microsoft Outlook during a profile creation. *Required:* No (by default the utility uses NTLM authentication method) *Value:* 1 or 0
AuthBasic	Specifies whether to use the **Basic Authentication** method for connecting to proxy server. It is specified in **Exchange Proxy Settings** in Microsoft Outlook during a profile creation. *Required:* No (by default the utility uses NTLM authentication method) *Value:* 1 or 0
AuthNegotiate	Specifies whether to use the **Negotiate Authentication** method for connecting to proxy server. It is specified in **Exchange Proxy Settings** in Microsoft Outlook during a profile creation. *Required:* No (by default the utility uses NTLM authentication method) *Value:* 1 or 0

Section [SwitchMessage]

This section is optional. It is used for creating or recreating switch message for mailboxes.

Parameter	Details
RecreateSwitchMsg	Specifies whether a Switch message needs to be recreated for each mailbox. *Required:* No *Value:* 1 or 0
MigrationAgentType	Indicates what version of Switch message should be created. *Required:* Yes *Value:* one of the following (cannot be empty) • **Legacy** —If mailboxes are migrated by Migration Manager for Exchange Legacy agents. • **Contemporary** — if mailboxes are migrated by ODME or Migration Manager for Exchange MAgE.
TargetServer	The target Exchange server name. Its format depends on target Exchange Server version: • Exchange 2010 or lower: FQDN format • Exchange 2013 or higher : Mailbox GUID, @ symbol, and the domain part of the user's primary SMTP address (`<Mailbox GUID>@<Domain Part>`) *Required:* Yes *Value:* string (cannot be empty)
IsMAPIEncryptionRequired	Specifies whether the target Exchange organization explicitly requires encryption. *Required:* Yes if the target Exchange server is **not** Microsoft Office 365. Otherwise, no. *Value:* 1 or 0
DomainName	The name of the target domain. *Required:* Yes if the target Exchange server is **not** Microsoft Office 365. Otherwise, no. *Value:* string (can be empty)
DomainControllers	A semicolon-separated list of all domain controllers in the target domain. *Required:* Yes if the target Exchange server is **not** Microsoft Office 365. Otherwise, no. *Value:* string (can be empty)
ExchangeServers	A semicolon-separated list of all target Exchange servers. *Required:* Yes if version of the switch message is v5 or v6. Otherwise, no. *Value:* string (can be empty)

Parameter	Details
TargetProxyServer	The target proxy server name in the RPC over HTTP settings. *Required:* Yes if MigrationAgentType=Contemporary. Otherwise, no. *Value:* string (cannot be empty)
Target	Indicates type of target Exchange server. *Required*: Yes if MigrationAgentType=Contemporary. Otherwise, no. *Value*: one of the following (cannot be empty): • **Exchange** —if target server is Microsoft Exchange On-Premises • **O365**—— if migration target is Microsoft Office 365 tenant
Target Version	Specifies the target Exchange server version. *Required:* Yes if MigrationAgentType=Contemporary. Otherwise, no. *Value*: version number of target Exchange server. For example, **14.0.0.0** for Exchange 2010, **15.01.0.0** for Microsoft Office 365

Section [Mailboxes]

This section is mandatory for Microsoft Outlook 2010 and Microsoft Outlook 2013. It should contain a list of **legacyExchangeDN** attribute of source resource mailboxes which should be updated.

Section [MailboxesSMTP]

This section is mandatory for processing Microsoft Outlook 2016 and Microsoft Outlook 2019 profiles. It should contain a list of SMTP addresses of source resource mailboxes to be updated. In case of Microsoft Outlook 2010 and Microsoft Outlook 2013 profiles, the Switch Resource Mailboxes utility looks for SMTP addresses for a list of mailboxes from section **[Mailboxes]**.

Section [TargetMailboxesSMTP]

This section is used for creating or recreating switch message for mailboxes only. It is optional for processing Microsoft Outlook 2010/2013 and should only be specified for processing Microsoft Outlook 2016 and Microsoft Outlook 2019 profiles. It should contain a list of SMTP addresses of target mailboxes to be updated. If this section is empty or not specified, the Switch Resource Mailboxes utility looks for target SMTP address AD property for each mailbox from a list of mailboxes in section **[MailboxesSMTP]** by querying Active Directory.

SwitchResMB.ini Example

Below is an example of the INI file for Switch Resource Mailboxes utility if your target is Exchange Server 2010 or earlier and Microsoft Outlook 2010/2013 is used:

```
[Settings]

CPUUCmdLine=

SrcExchServer=Source

LogonNetworkSecurityNegotiate=1

[Mailboxes]
```

```
/o=SourceOrg/ou=Exchange  Administrative  Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=Room-1

/o=SourceOrg/ou=Exchange  Administrative  Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=Room-2

/o=SourceOrg/ou=Exchange  Administrative  Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=Room-3
```

If you want to create switch message add the following two sections:

```
[AD]

DCName=DC.source.domain

DCAccount=source\administrator

DCPassword=7F3A62CD00FC1DDDCD

[SwitchMessage]

MigrationAgentType=Legacy

TargetServer=Target

IsMAPIEncryptionRequired=1

ExchangeServers=ex1.target.domain  ex2.target.domain

DomainName=  target.domain DomainControllers=dc.target.domainl
```

Below is an example of the INI file for Switch Resource Mailboxes utility if your target is Exchange Server 2013 or higher and Microsoft Outlook 2010/2013 is used:

```
[Settings]

CPUUCmdLine=

SrcExchServer=Source

LogonNetworkSecurityNegotiate=1

[RPCOverHTTP]

ConnectUsingHTTP=1

ProxyServer=proxy.source.domain

SSLOnly=0

MutualAuth=0

PrincipalName=

HTTPFirstOnFast=1

HTTPFirstOnSlow=0

AuthNtlm=1

[Mailboxes]
```

```
/o=SourceOrg/ou=Exchange  Administrative  Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=Room-1

/o=SourceOrg/ou=Exchange  Administrative  Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=Room-2

/o=SourceOrg/ou=Exchange  Administrative  Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=Room-3
```

If you want to create switch message add the following two sections:

```
[AD]

DCName=DC.source.domain

DCAccount=source\administrator

DCPassword=7F3A62CD00FC1DDDCD

[SwitchMessage]

MigrationAgentType=Contemporary

Target=Exchange

TargetVersion=15.0.1076.9

TargetServer=a966e7da-0339-4ae9-9ba7-a9d8016e93ee@target.domain

TargetProxyServer=proxy.target.domain

IsMAPIEncryptionRequired=1

ExchangeServers=ex1.target.domain  ex2.target.domain

DomainName=  target.domain DomainControllers=dc.target.domain
```

Below is an example of the INI file for Switch Resource Mailboxes utility if Microsoft Outlook 2016/2019 is used:

```
[Settings]

CPUUCmdLine=

SrcExchServer=

[MailboxesSMTP]

Room-1@source.domain

Room-2@source.domain

Room-3@source.domain
```

If you want to create switch message add the following two sections:

```
[AD]

DCName=DC.source.domain

DCAccount=source\administrator

DCPassword=7F3A62CD00FC1DDDCD
```

```
[SwitchMessage]

MigrationAgentType=Contemporary

Target=Exchange

TargetVersion=15.0.1076.9

TargetServer=a966e7da-0339-4ae9-9ba7-a9d8016e93ee@target.domain

TargetProxyServer=proxy.target.domain

IsMAPIEncryptionRequired=1

ExchangeServers=ex1.target.domain  ex2.target.domain

DomainName=  target.domain DomainControllers=dc.target.domain
```

OR add the following two sections:

```
[TargetMailboxesSMTP]

Room-1@target.domain

Room-2@target.domain

Room-3@target.domain

[SwitchMessage]

MigrationAgentType=Contemporary

Target=O365

TargetVersion=15.1.1076.9

TargetServer=a966e7da-0339-4ae9-9ba7-a9d8016e93ee@target.domain

TargetProxyServer=proxy.target.domain
```

Recommended Values for the CPUU.ini Parameters

It is recommended to edit the CPUU configuration file (**CPUU.ini**) before you start the Switch Resource Mailboxes utility as suggested below:

```
[Parameters]

Features= Delegates Rules

Silent=1
```

IMPORTANT: When using CPUU in conjunction with Migration Manager for Exchange, there is no defined limit for the maximum number of features that can be processed by CPUU. If you want to process all mailbox features, do not specify a value for the **Features** parameter. The feature list from the example above is recommended only for resource mailboxes.

However, if you use CPUU in conjunction with ODME, specify `Skip=All`.

It is also recommended to use the **Silent=1** switch so that CPUU does not display any dialog boxes.

SwitchResMB Exit Codes

When the Switch Resource Mailboxes utility finishes, it sets the value of the errorlevel variable based on its exit status. The following bit mask can be used to retrieve Switch Resource Mailboxes utility completion status from the errorlevel code:

0	Processing successfully completed
1	Processing failed with errors
2	Incorrect command line parameters
4	Incorrect parameters in the INI configuration file
8	Unable to create one profile
16	Unable to create all profiles
32	Incorrect CPUU command line
64	Unable to start CPUU for updating profiles
128	Unable to start CPUU for cleanup

Troubleshooting

The following topics describe issues that may occur when working with the Client Profile Updating Utility, and how to resolve them:

- Dealing with Slow Connection while Updating Profiles
- Dealing with Autodiscover service issues
- Rolling Back Changes

Dealing with Slow Connection while Updating Profiles

When CPUU updates a user profile on a computer, it establishes a connection between the computer and an Exchange server where the corresponding user mailbox resides to get necessary data from the mailbox and update it accordingly. The problem is that if the user's computer has a slow connection to networks where that Exchange server is located (for instance, computer is connected to network through VPN or dial-up connection), those tasks will be performed slowly. That, in turn, affects overall CPUU performance so it may take several hours to update the user profile.

What you can do

You have the following options to achieve the best possible performance when connection between user's computer and network is slow:

1. Choose to process only necessary features

When planning to process user profiles on computers with slow connection to Exchange server, consider skipping features that are not necessary, or can be easily restored by user her- or himself.

As an example, the **Nicknames** (AutoNameCheck) feature take the longest to be updated over a slow connection.

You can configure CPUU to skip it in **CPUU.ini**:

```
Remove=Nicks
```

NOTE: For detailed information on supported features, see What the Utility Updates

2. Use SwitchResMB to process mailbox features

You can use SwitchResMB to process user mailbox features and then CPUU to finally switch the user profile. For details, see the topic below.

Processing user mailboxes with SwitchResMB and CPUU

For slow connections you can take an option to use Switch Resource Mailboxes (SwitchResMB.exe) utility installed on a computer in the same network where the Exchange server is located to process features and settings in the user mailbox. Then the corresponding user profile can be switched by CPUU locally on the user's computer. In this case, all features must be skipped when running CPUU.

This approach allows to achieve best performance, however the SwitchResMB utility has some limitations regarding supported mailbox features in comparison to CPUU.

TIP: For information how to use SwitchResMB, see Updating Resource Mailboxes.

The following table denotes which CPUU features can be processed by SwitchResMB. Carefully review it to decide whether this approach is appropriate for you or not.

CPUU Feature	SwitchResMb with Outlook 2010, 2013, 2016
Additional Mailboxes	Not supported
Contact Members	Limited support: contacts stored in PST file cannot be processed
CONTAB	Not supported
Delegates	Supported
Folder Lists	Not supported
Nick files	Supported
Other User's Folders	Not supported
Public FAV	
Rules	Limited support: rules with links to items in PST file cannot be processed
Send/Receive Settings	Not supported
Search Folders	Limited support: search folders in PST file cannot be processed
Services	Not supported
Shortcuts	
User Names	
Favorites	Limited support: links to items in PST file cannot be processed
Calendar Pane	
Contacts Pane	
Tasks Pane	
Notes Pane	
Journal Pane	

Dealing with Autodiscover service issues

This section will help you to look into possible root cause of Autodiscover problems by matching CPUU log messages.

Error message in CPUU log	Root cause
`[TraceW] Failed to get Autodiscover response for email 'gc04@gemini.local'. Autodiscover URL: 'https://trideca1.gemini.local/autodiscover/autodiscover.xml'.`	Incorrect Autodiscover URL was specified for

Error message in CPUU log	Root cause
WinHTTP result: 0x00002ee7, Description: **The server name or address could not be resolved** [Warning] Cannot get an Autodiscover response for the user 'gc04@gemini.local' from the URL: 'https://trideca1.gemini.local/autodiscover/autodiscover.xml'. [Error] Cannot get an Autodiscover response on source. See logged errors to resolve the issue. Profile will not be processed.	**source**
[TraceW] Failed to get Autodiscover response for email 'gc04@gemini.local'. Autodiscover URL: 'https://trideca.gemini.local/autodiscover/autodiscover.xml'. Custom result: 0xc01000cf, Description: **HTTP status code 401 (Unauthorized) received. This response indicates that authorization has been refused for the account used to access destination, or specified credentials are invalid.** [Error] Cannot get an Autodiscover response on target. See logged errors to resolve the issue. Profile will not be processed.	Incorrect credentials were specified for **target**
[Warning] **User LegacyExchangeDN properties are different: from the source Autodiscover response**: '/o=First Organization/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=gc04', from the profile: '/o=Orga1/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=99fd5306e4d641c6b88c597fb146402f-gc04'. [Error] Cannot get an Autodiscover response on source. See logged errors to resolve the issue. Profile will not be processed.	Autodiscover URL points to wrong Exchange server for **source**
[TraceW] Failed to get Autodiscover response for email 'gc04@gemini.local'. Autodiscover URL: 'https://trideca.gemini.local/autodiscover/autodiscover.xml' WinHTTP result: 0x00002efd, Description: **A connection with the server could not be established** Or WinHTTP result: 0x00002ee7, Description: **The server name or address could not be resolved** [Warning] Cannot get an Autodiscover response for the user 'gc04@gemini.local' from the URL: 'https://trideca.gemini.local/autodiscover/autodiscover.xml'. [Error] Cannot get an Autodiscover response on source. See logged errors to resolve the issue. Profile will not be processed.	Cannot connect to the **target** Autodiscover service due to network problems, or service unavailability, or wrong URL

Rolling Back Changes

The changes made by CPUU in the Microsoft Outlook profiles can be rolled back if any issues occurr during the update. You will likely need to undo changes made in one or several selected profiles. Unless you want to roll back changes made in all mailboxes' profiles, do not start the Client Profile Updating Utility from the logon script. Instead, copy the **ClientProfileUpdatingUtility.exe** file and a batch file to a user's workstation and start the utility manually from that workstation.

To undo the changes made by the Client Profile Updating Utility, run the **CPUU_Rollback.bat** file that was created by the **Client Profile Updating Utility Configuration** wizard.

> **CAUTION: No rollback is possible if the Cleanup operation has been performed. For more information about Cleanup mode, refer to the Modes topic.**

Technical Reference

This section covers technical reference information about Client Profile Updating Utility, as follows:

CPUU Parameters
Notification Format
Critical Functionalities
CPUU Return Codes

CPUU Parameters

Entering or reviewing command-line parameters is usually not necessary. The **Client Profile Updating Utility Configuration** wizard creates configuration files (**CPUU.ini** and **CPUU_Update.bat**) with the appropriate parameters for you.

You need to reference this section only in the following cases:

- You read about a parameter in the **Client Profile Updating Utility Configuration** wizard online help and want more information.
- You want to create the command line by yourself (though this is not recommended) and run the Client Profile Utility from the command line rather than using the configuration files generated by the **Client Profile Updating Utility Configuration** wizard.

Management Parameters

The following management parameters are used in **CPUU_Update.bat:**

Parameter	Description
-Profiles <ProfileName1> [ProfileName2] [ProfileName3] [...]	Makes the Client Profile Updating Utility process the specified profiles only. **NOTE:** If two versions of Outlook are installed side-by-side on the computer, CPUU processes profile from the newer version of Outlook.
-Undo <ProfileName1> [ProfileName2] [ProfileName3] [...]	Rolls back changes made to the specified profiles. Specify the names of the profiles you want to undo the changes in. If the utility is run with this parameter from a logon script, the changes will be rolled back on every workstation.

Parameter	Description
-UndoAll	Rolls back all changes made by the utility to all updated profiles. If the utility is run with this parameter from a logon script, the changes will be rolled back on every workstation.
-DefaultProfile	Default profiles can be updated with the **-DefaultProfile** parameter, without the need to look up the profile name.
-LeaveTemporaryProfile	Before updating a profile, CPUU checks that the target mailbox is available and accessible with current CPUU.ini settings by creating the temporary target profile and trying to logon to it. By default, the temporary profile will be deleted after that. If **-LeaveTemporaryProfile** is specified, temporary profile will remain. Temporary profile name is like the following: CPUU_{<random GUID value>}. **-LeaveTemporaryProfile** is useful if CPUU cannot access the target mailbox with current **CPUU.ini** settings. In this case, you can leave the temporary target profile, open it in the Mail Control Panel applet and check which of the profile settings are incorrect and determine what should be changed in **CPUU.ini** to force CPUU to set the correct settings for a target profile.
-UndoDefaultProfile	Default profiles can be rolled back with the **-UndoDefaultProfile** parameter, without the need to look up the profile name.
-Log <LogFile>	Specifies the name and path to the log file. You can specify either the full path to the log file or only the file name, in which case the log will be written to the folder from which the utility is started. If this parameter is not specified, the log file will be created with the default name, **CPUU.log**. You can use the following additional parameters to add the client computer name and the current date and time: **#H** – inserts client computer name **#D** – inserts the current date **#T** – inserts the current time You can also use the existing environment variable values to form the CPUU log file name. For example, you can add the user name of the account currently logged on to the name of the log file by typing the following expression: **%username%_CPUU.log** The **%username%** parameter will be replaced with the real user name associated with the security context in which CPUU was started.

Parameter	Description
	NOTE: If CPUU log files reside in a remote location, CPUU first writes all .log, .csv and crash dump files into the **CPUULogs** folder in the **TEMP** directory on the local computer and after CPUU completes its operations, the .log and .csv files are moved to the remote folder. Crash dump files are not moved by default. The maximum number of dump files in the **CPUULogs** folder is limited to 10.
-MoveDumpsToRemote	Enables moving of crash dump files to the CPUU log folder if this folder is located on the remote computer.
-MaxLocalDumps	Specifies the maximum number of dump files to be stored in the **%TEMP%\CPUULogs** folder on a local computer. The default value is **10**.
-LogWriteDirectly	CPUU writes all .log, .csv and crash dump files directly to the CPUU log folder if this folder is remote.
-Cleanup	Deletes all backup profiles and cleans up all auxiliary backup information. Please make sure that all profiles have been successfully updated and no rollback is required before running the utility with this parameter.
-INI <FileName>	Specifies the path to the INI file. By default, the file resides in the same directory as **CPUU_Update.bat**.
-ExcludeScpLookupAlways	Disables Autodiscover SCP lookup for Outlook. This parameter is set by default when processing Outlook 2016 profiles. Autodiscover SCP lookup must always be disabled when processing Outlook 2016 profiles for mailboxes migrated using Migration Manager for Exchange. Note that setting this parameter affects all Outlook profiles for the logged on user account.
-ExcludeScpLookupNever	By default, CPUU disables Autodiscover SCP lookup when processing Outlook 2016 profiles as described in Using CPUU for Outlook 2016/2019. To turn off that behavior specify this parameter. In particular, it should be always specified when processing Outlook 2016 profile for a mailbox migrated using On Demand Migration for Email. **NOTE:**This parameter is effective only in case the URLs of the Autodiscover service for source and for target are not specified on the **Autodiscover** step of the Client Profile Updating Utility Configuration wizard.
-NameTrgStoreAsSrc	This parameter configures CPUU to preserve a source store display name after switching profile to a target mailbox. It is useful in migrations from one Office 365 tenant to another using ODME in which target store by default has the *.onmicrosoft.com* domain suffix and you

Parameter	Description
	plan to change it to the source name after all mailboxes from the source tenant are migrated to the target tenant and then switched.
-SkipAutodiscoverChecking	By default, CPUU checks that an Autodiscover URL is on a source domain and a target autodiscover URL is on a target domain. To turn off that behavior specify this parameter for Microsoft Outlook 2016/2019 in case RecreateSwitchMsg is set to **1** in SwitchResMB configuration file. CPUU cannot update the profile in case Outlook Profile and switch message do not contain valid information about source Autodiscover URL and target Autodiscover URL.
-?	Displays help information.

Configuration Parameters

The following configuration parameters are used in **CPUU.ini:**

Parameter	Description
Admin <Domain\User>	Allows the user to specify the administrative account to be used to work with Exchange mailboxes. This parameter can be used only together with the - **Password** parameter.
Password <EncryptedPassword>	Specifies the password for the Admin account. The password must be encrypted by the **Client Profile Updating Utility Configuration** wizard.
AdminTrg<Domain\User>; AdminTrg<User@email> - for Microsoft Office 365	Allows the user to specify the administrative account to log on to the target mailboxes. This parameter can be used only together with the **PasswordTrg** parameter. The parameter is helpful when no trust relationships are established between the source and target domains.
PasswordTrg <EncryptedPassword>	Specifies password for the AdminTrg account. The password must be encrypted by the Client Profile Updating Utility Configuration wizard.
AskCredentials	Makes the utility prompt for credentials to log on to the source server. If the specified credentials do not allow logon to the target server, the utility prompts for target server credentials also. If the parameter was used in update mode, CPUU will prompt for credentials automatically when the profile is cleaned up or rolled back.
AskSourceCredentialsOnly	Specifies that provided by user source credentials will be used for access to target linked mailboxes in case **Prompt for credentials** mode is selected (**AskCredentials** is set to **1**). Possible values are **0** (default) and **1**. For more details see Typical Scenario.
AllowAdditionalServices <Svc1> [Svc2] [Svc3] [...]	Forces the utility to process the non-default service providers whose MAPI names are specified as the parameter values. To process all the existing services, specify the value <All> as the parameter. The services updated by default are: • Microsoft Exchange Server (MSEMS)

Parameter	Description
	• Personal Address Book (MSPST AB) Personal Folders (**.PST**) File (MSPST MS; MSUPST MS) • Outlook Address Book (CONTAB) • Microsoft LDAP Directory (EMABLT) • Internet Folders (INTERSTOR) • Internet E-mail (IMAIL)
Skip <Value1> [Value2] [Value3] [...]	Forces the utility to skip the specified functionalities. For more information, see the Using a Dial-Up Connection while Updating Profiles topic.
Features <Value1> [Value2] [Value3] [...]	Forces the utility to process only the specified features. This functionality cannot be used along with the Skip parameter.
Critical <Value1> [<Value2>] [<Value3>] [...]	Forces the utility to skip profiles for which the critical functionalities specified as the values of this parameter cannot be updated. As values of this parameter, you can specify such functionalities as Rules and CONTAB. A complete list of functionalities can be found in the Critical Functionalities topic.
Remove Nicks	Forces the utility to remove all nicknames from the profile. If the nickname functionality is also specified in the Critical key and errors occur during nickname removal, the update will automatically be rolled back.
RemoveJunkEmailMessages	Forces CPUU to remove all junk e-mail settings from the updated profile.
ProcessOfflineProfiles	Forces the utility to process offline profiles.
KeepOST	Forces CPUU to associate the original source OST file with the target mailbox profile if the corresponding source mailbox was processed within a Remote Users Collection by the Mail Agent. Otherwise, this parameter is ignored.
BackupOST	Forces CPUU to create a backup copy of the original source OST file if the corresponding source mailbox was processed within a Remote Users Collection by the Mail Agent. Otherwise, this parameter is ignored.
CreateRegFileForOSTRecovery	Prevents the utility from creating the registry (REG) file used for restoring a lost link between OST file and a profile.
UseTargetOST	**UseTargetOST** is used only during rollback. This option tells Client Profile Updating Utility to keep the OST file for the target mailbox after rollback.
Silent	Prevents the utility from displaying any dialog boxes while updating profiles.
SkipPing	Specifies that the utility should not ping the target Exchange server to verify its availability. Always use this parameter when the target network has no RPC/TCP connectivity and relies only on HTTP.
WatchDog	Launches [1] or stops [0] the watchdog process (by default, this process starts together with CPUU). This process watches the CPUU hangs and stops the utility using the **OpenStoreWait**, **FeatureWait**, **GlobalWait** options. Then the watchdog process restarts CPUU.
StopProcesses	Watchdog stops all processes that are specified as the value for the

Parameter	Description
	StopProcesses parameter before it starts CPUU. The following processes are stopped by default: • Microsoft Communicator (**Communicator.exe**) • Microsoft Outlook (**Outlook.exe**) • Blackberry Desktop Software 6.x (**Rim.Desktop.exe**) • Blackberry Desktop Software (Legacy) **(Desktopmanager.exe**) • Google Calendar Sync (**GoogleCalendarSync.exe**)
Attempt [N]	Sets the maximum number of attempts to restart CPUU (by default, three times).
OpenStoreWait	Sets the maximum allowed wait period to open a store (in seconds).
FeatureWait	Sets the maximum allowed wait period for a feature to finish its operations (in seconds).
GlobalWait	Sets the maximum run time period for CPUU (in seconds).
[Notification]	In this section, you can forces the utility to send a notification message about update results to the addresses specified in the file. The format of the section can be found in the Notification Format topic.
ProcessedDomainsFQDNs	**IMPORTANT:** All user's and public folders SMTP domain names that are the same at source and at target must be specified. The following is an explanation of CPUU behavior depending on **ProcessedDomainsFQDNs**: Please do not use semicolon {;}, comma {,}. or any other separators except space character when you specify the values for the **ProcessedDomainsFQDNs** parameter, for example: `ProcessedDomainsFQDNs=<domain name 1> <domain name 2> <domain name 3>`. • If **ProcessedDomainsFQDNs** is empty, and there is only one Exchange account in a profile, CPUU switches this Exchange account in the profile. • If **ProcessedDomainsFQDNs** is not empty, and there is only one Exchange account in a profile, CPUU checks that the Exchange account is allowed by **ProcessedDomainsFQDNs** and, if so, then switches this account. Otherwise, the account will be skipped. • If **ProcessedDomainsFQDNs** is empty, and there are a few Exchange accounts in a profile, CPUU logs the following error: "Profile <profile name> contains multiple Exchange accounts". CPUU requires that you specify the **ProcessedDomainsFQDNs** parameter to determine if the primary account is allowed to switch. • If **ProcessedDomainsFQDNs** is not empty, and there are a few Exchange accounts in a profile, CPUU checks that the primary Exchange account is allowed by **ProcessedDomainsFQDNs** and, if so, then switches the primary account and ignores the others.

Parameter	Description
UseLocalAutodiscoverXMLs	Specifies whether local Autodiscover XML files will be used. Possible values are **0** (default) and **1**. • **1**: Use local Autodiscover XML files • **0**: Do not use local Autodiscover XML files See **Autodiscover** step of the Typical Scenario topic for details.
AutodiscoverSourceURL	Specifies URL of the Autodiscover service for source. See **Advanced Tuning** step of the Typical Scenario topic for details.
AutodiscoverTargetURL	Specifies URL of the Autodiscover service for target. See **Advanced Tuning** step of the Typical Scenario topic for details.
MigrationType	Specifies the type of Outlook profile processing. This parameter might take one of the following values: • **Default**: Standard Outlook profile processing, except for tenant to tenant migration with domain name transfer; • **T2TKeepDomain**: Tenant to tenant migration, keeping the source domain name.
BypassModernAuthentication	Disables Modern Authentication while Client Profile Updating Utility process Outlook profiles in Microsoft Office 365 tenants with enabled Modern Authentication. By default is set to **1**: Modern Authentication is disabled while Client Profile Updating Utility process Outlook profiles.

Notification Format

The **Client Profile Updating Utility Configuration** wizard creates a section in the **CPUU.ini** file that contains the notification settings. You need to reference this section only if you want to create the command-line by yourself and receive notifications about CPUU activities.

Section Format

Here is an example of the **CPUU.ini** file section that stores notification settings:

```
[Admin notification]

SMTPAddress=address1@domain.com address2@domain.com

Priority=normal

Attach log=statistics

Notification=fail

Profile=current

Subject=%R: Profile %P on computer %H

Body=The mail client profile %P for user %U on computer %H has been processed by
Client Profile Updating Utility (CPUU), and was %R. The profile was processed at %T,
%D. See the CPUU log file for details.
```

Admin notification – The name of the section. Cannot be changed.

SMTPAddress – Specifies one or several SMTP addresses to which the notification will be sent.

Priority – Defines the priority of the notification.

Possible values: low, high, normal.

Attach log – Defines what should be attached to the notification message. Possible values:

- **none** – No attachment will be send with the notification.
- **all** – The full log will be attached to the notification.
- **statistics** – The statistics gathered from the log file will be attached to the notification.

Notification – Defines in what cases notification should be sent. Possible values:

- **success** – Notification will be sent if the profile has been successfully updated.
- **fail** – Notification will be sent if the profile has not been updated.
- **all** – Notification will be sent in any case.

Profile – Defines which profile should be used to send notifications.

- **default** – Notification will be sent via the default profile as soon as this profile is updated. This is the default value.
- **current** – Notification will be sent via the current profile as soon as this profile is updated.

Subject – Specifies the notification subject.

Body – Specifies the notification body.

Variables

The following variables can be used in the subject and body of the notification message:

```
%r, %R UPDATED or NOT UPDATED

%u, %U User name (for Windows 9x, the Profile name parameter value is used)

%p, %P Profile name

%h, %H Computer name

%t, %T Time

%d, %D Date

%% %
```

Critical Functionalities

If you run CPUU from the command line rather than using the configuration files configured by **Client Profile Updating Utility Configuration** wizard, you can force CPUU to skip profiles in which it cannot update the functionalities that you define as critical. For example, if it is critical that rules be updated, you can specify **Rules** as the value of the –**Critical** parameter in the INI file.

Below you will find the list of critical functionalities that can be specified as values for the –**Critical** parameter and the names of the appropriate Microsoft Outlook settings:

Value	Microsoft Outlook Setting
Activities	Activities
AddBoxes	Additional Mailboxes
CONTAB	Outlook Address Book
Delegates	Delegates
Rules	Rules
SRS	Send/Receive Settings
SearchFolders	Search Folders
Shortcuts	Shortcuts (for Microsoft Outlook)

Most of the functionalities listed here are described in the What the Utility Updates topic.

CPUU Return Codes

If errors occur during the profiles update, the corresponding return codes are recorded in the CSV file. The name of this file has the same format as the CPUU log file name (**CPUU_#h_#d_#t.csv**). The file contains the following data separated by tab character.

```
<profile name> <current status of the profile> <previous status of the profile>
```

The following table contains the CPUU return codes and its descriptions:

Error code	Error	Description
0	**PROFILE_WAS_NOT_ PROCESSED**	Profile is not processed.
1	**PROFILE_IS_BACKUP**	Profile is a backup copy of the original profile.
2	**PROFILE_ALREADY_ UPDATED**	Profile is already updated.
3	**PROFILE_BACKUP_NOT_ FOUND**	Backup profile was not found. Cannot restore and update profile.
4	**PROFILE_NOT_RESOLVED**	Profile cannot be resolved and is being skipped.
5	**PROFILE_NOT_EXCHANGE_ SERVICE**	Server name and/or mailbox DN is not specified for the Exchange service. Profile is being skipped.
6	**PROFILE_IS_OFFLINE**	Profile is being skipped, because offline profiles cannot be processed unless the '-**ProcessOfflineProfiles**' parameter is specified with the 'On' value.
7	**PROFILE_HAS_NO_ SEREVER**	No 'Microsoft Exchange Server' service is specified in this profile.
8	**PROFILE_UNEXPECTED_**	Profile contains unexpected service(s) and

Error code	Error	Description
	SERVICES	is being skipped.
9	**PROFILE_FAILED_TO_ CREATE_BACKUP**	Cannot create a backup copy for this profile.
10	**PROFILE_MODIFYING_OK**	Profile was successfully updated.
11	**PROFILE_MODIFYING_ FAILED**	Cannot update profile.
12	**PROFILE_RESTORE_OK**	Profile was successfully rolled back.
13	**PROFILE_RESTORE_FAILED**	Cannot roll back profile.
14	**PROFILE_CLEANUP_OK**	Profile was successfully cleaned.
15	**PROFILE_CLEANUP_FAILED**	Cannot clean up profile.
16	**PROFILE_CLEANUP_ CANCELED**	Cleanup operation was canceled by the user.
17	**PROFILE_IS_UNABLE_ OPEN_DEFSTORE**	Cannot open default message store.
18	**PROFILE_IS_UNABLE_ OPEN_MAILBOX_STORE**	Cannot open mailbox message store.
19	**PROFILE_HAS_ UNSUPPORTED_ AUTHENTICATION**	Profile authentication type is not supported.
20	**PROFILE_HAS_CFG_UI_ LOCK**	Profile is locked due to open properties dialog box.
21	**PROFILE_IS_OFFLINE_AND_ RC**	Unexpected error occurred.
22	**PROFILE_NOT_FREESPACE_ FOR_BACKUPOST**	Not enough disk space for the OST file backup.

ClientProfileUpdatingUtility.exe Exit Codes

When Client Profile Updating Utility finishes, it sets the value of the errorlevel variable based on its exit status. The following bit mask can be used to retrieve Client Profile Updating Utility completion status from the errorlevel code:

0	CPUU_CANNOT_START
1	CPUU_SUCCESS
2	CPUU_NO_SWITCH_MSG
4	CPUU_SWITCH_ERR
8	CPUU_USER_ABORT
16	CPUU_GLOBAL_ERR
32	CPUU_CRASH
64	CPUU_FAILED_TO_WRITE_LOG
128	CPUU_FAILED_TO_CREATE_TMP_DIR

256 CPUU_FAILED_TO_COPY_LOCALLOG_TO_REMOTE_SHARE
512 CPUU_INVALID_SWITCH_MSG

NOTE: CPUU returns CPUU_CRASH if the application crashes.

If you stop the CPUU process by using Task Manager, you receive the CPUU_SUCCESS return code.

The following table lists the errorlevel flags that can be set for each mode Client Profile Updating Utility runs in:

Status	Return Code (errorlevel)
Exit after running in Update mode.	CPUU_CANNOT_START—Nothing to update. CPUU_SUCCESS—One or more profiles were updated. CPUU_NO_SWITCH_MSG—No switch message was found for one or more profiles. CPUU_SWITCH_ERR—Update failed for one or more profiles. CPUU_GLOBAL_ERR—Update failed. CPUU_USER_ABORT—Update was aborted by the user.
Exit after running in Undo mode.	CPUU_CANNOT_START—Nothing to undo. CPUU_SUCCESS—One or more profiles were un-done. CPUU_SWITCH_ERR—Undo failed for one or more profiles.
Exit after running in Cleanup mode.	CPUU_CANNOT_START—Nothing to clean up. CPUU_SUCCESS—One or more profiles were cleaned up. CPUU_USER_ABORT—Cleanup was aborted by the user. CPUU_GLOBAL_ERR—Cleanup failed.

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