Background and Description

Toolkit is designed to allow designated users access to various aspects of Blue AD and Exchange Online, including group and shared mailbox management.

Access and Authentication

Toolkit is available on https://toolkit.blue.cam.ac.uk and is AzureAD authenticated. This means that, if enabled for your account, you might be prompted with MFA when you access it.

There are two ways for end users to authorize access to Toolkit:

1) Each institution has a self-managed Lookup group called “Toolkit Management Group”. Members of this group will gain full access to Toolkit for that institution. This includes being able to see an “Administration” tab to allow more selective access for others.

2) Being added via the above referenced “Administration” tab which will allow selective access to parts of Toolkit.

Selecting which institution to manage

If the user is associated with multiple institutions, then at the top section of the page there is a grey bar with an “Institution” dropdown list, containing the names of all institutions in Blue that that user is authorized to manage.

A user can choose any of the entries in the list, then click “Change” to switch to that site and display groups associated to that institution. This choice is saved in a browser cookie and will be automatically selected whenever a user returns to this page.

If a user only has access to a single institution, that institution will be automatically selected and the user will not see the grey bar.
Groups

The initial view shows a list of groups/distribution lists at the selected institution. This list shows:

- The display name
- The membership count
- Whether the distribution list is hidden in the Global Address List
- Whether the group is synchronized with a Lookup group and the last sync status message
- The email address for distribution lists

To the left of the display name is an information icon (ⓘ) which, when clicked, will show a little extra information (such as the underlying Blue AD name of the group).

Clicking on column headings will sort by that column.

The “Lookup synchronization” column will show either:

- Nothing, if the group is not being synchronized with Lookup
- An “upload” arrow to indicate the AD group is being synchronized to the Lookup group
- A “download” arrow to indicate the AD group is being synchronized from the Lookup group

Alongside the arrow will be a brief description of the latest sync status.

Above the column headers are a refresh icon to reload the group list, a group type filter dropdown, and two filter textboxes.

The group type filter can be used to only show groups of a certain type, either:

- **All groups**
- **Security groups** – these are the default type of group created by Toolkit
- **Shared mailbox access groups** – these are the groups automatically created when a Shared Mailbox is created by Toolkit
- **Distribution lists** – these are security groups with an added email address

This selection will be honoured even if additional filtering is specified by the following options -

Entering a CRSID into the “Filter groups by member” textbox and clicking ‘Apply filter’ will filter the list of groups to only those that have the specified user as a member. While that filter is applied a new ‘Remove '<user>' from these groups” button will become available. Clicking this button will remove the filtered user from all the visible groups in one go. Alternatively click the ‘Clear filter’ button to revert to showing all groups.

The list can also be filtered on group name – enter part of a group name in the “Filter groups by name” textbox to only show those groups that have names that (partially) match the entered text. Again, click “Clear filter” to remove this filter.
At the bottom of the page are buttons to create, delete and edit groups and, on the right-hand side, a button to export the currently displayed list of groups as a CSV file.

**Create new group**

This button will open a new window allowing you to create a group or distribution list. The only required field is the “Display name”, which must be unique across Blue AD. The group will be created using a GUID as the underlying AD object name (to ensure uniqueness). If you are creating a ‘normal’ group, this is all that is required and clicking ‘Create group’ will cause the group to be created.

If you wish to synchronize the membership of this group with a Lookup group, you can choose a sync type of “To Lookup” or “From Lookup”, and then pick which Lookup group you wish to sync with. The following conditions need to be satisfied for a Lookup group to appear in the list –

1. The current Toolkit user must be able to manage the Lookup group
2. The “uis-toolkit-group-sync” Lookup group must be granted either “Managed by” permissions on the target Lookup group (for syncing to/from) or “Privileged access by” permissions if only syncing from Lookup.

Once configured, syncing will occur approximately once an hour. Changes to the group membership will be logged in the “Audit” tab.

If you wish to create a distribution list then, in addition to a display name, you will need to assign an email address to the list. The domain for this address must be selected from a dropdown list which will contain only those domains available to the current institution.

The selected domain can be cleared by clicking on the dropdown list then tapping the backspace key.

You can also choose whether the distribution list will be hidden in the Global Address List. By default they will be visible.

If required, you can add a number of ‘Permitted Senders’ to the distribution list. ‘Permitted Senders’ are users or groups that are allowed to send email to the distribution list; adding anything to ‘Permitted Senders’ will stop everything not listed from sending email to the distribution list. Click “Add sender” then enter either the CRSID, display name or email address for the sender. Clicking the information icon next to a permitted sender will show the full ‘distinguished name’ which you can use to check that the correct person has been added.

Selecting one or more permitted senders will allow you to remove them by clicking “Remove sender”.

Once done, click “Create group” to create the distribution list.
Delete selected group
When a group is selected, this button will be available. Pressing the button will open a confirmation dialog, asking if you are sure you want to delete the group. Choosing ‘Yes’ will do so. **There is no undo function.** Choose ‘No’ to cancel the action.

Edit selected group
When a group is selected, this button will be available. Pressing the button will open an edit dialog, similar to the “Create group” dialog. You can then alter any aspect of the group and click “Apply changes” to make the change permanent.

Viewing group membership
To view group membership, double-click on the group in the group list. This will open a dialog showing the current list of members, and buttons to “Add new users”, “Remove users” and “Clear group”, with an “Export to CSV” button on the right.

If any users in the list are selected, the “Remove users” button will change to “Remove selected user(s)”. For each user, membership of licensing groups is also shown, indicating whether the user has access to EES-provided services (such as Teams, OneDrive, SharePoint etc), and also whether they are licensed for Exchange Online (and therefore whether they have a mailbox in that system). Because this shows licensing group membership, users may appear to be licensed before the automated processes have actually assigned the relevant licenses – a delay of approximately three hours may be noticed in some cases.

Double-clicking on a user will take you to the “User Information” tab, showing you additional data for that user.

Add new users
Clicking this button will open a dialog in which you can choose which users to add to the group. You can do so by:

- Entering CRSID(s) into the “Users” field. You can separate multiple CRSIDs by commas or spaces.
- Entering email addresses into the “Users” field. Blue AD will be searched for an object having this email address, and that object will be added to the group. If none found, then a new “Contact object” will be automatically created.
- Selecting an institutional group – the members of that group will be made members of this group.
- Selecting an institutional group – that group will become a nested member of the current group.
- Selecting a file – this file will be assumed to have one CRSID or email address per line.
Any combination of the above selections can be used. Clicking “Add users” will then attempt to add all chosen users to the selected group. A dialog will open which will show which users have been successfully added and which ones couldn’t be (for example because they are already members).

**Remove users**
Clicking this button will open the same dialog that “Add new users” opens, which will allow you to select which users you would like to remove from this group. See “Add new users” for the ways to specify a set of users.

**Remove selected user(s)**
Clicking this button will open a message box asking you to confirm the removal from the group of the selected users. If you agree to this confirmation, the selected users will be removed from the group.

**Clear group**
Clicking this button will open a message box asking you to confirm that you wish to remove all users from the group. If you agree to this confirmation, all users will be removed from the group.

**Export to CSV**
In most places where a list of items is displayed (for example the group list or the membership list) you will find an “Export to CSV” button on the right-hand end of the toolbar. Clicking this will convert the currently visible entries in the list into a CSV file which can be downloaded or opened in a suitable application.

**Shared mailboxes**
The initial view shows a list of shared mailboxes at the selected institution. This list shows:

- The display name
- The primary email address for the mailbox
- Whether the mailbox is hidden in the Global Address List
- A list of additional email addresses for the mailbox

To the left of the display name is an information icon (ⓘ) which, when clicked, will show a little extra information (such as the underlying Blue AD name of the group).

Clicking on column headings will sort by that column.
Above the column headers are a refresh icon (which will reload the mailbox list), and a filter textbox. Entering an email address into this box and clicking ‘Apply filter’ will filter the list of mailboxes to only those with the specified address associated with it. While a filter is applied, click ‘Remove filter’ to revert to showing all mailboxes.

At the bottom of the page are buttons to create, delete and edit mailboxes and, on the right-hand side, a button to export the currently displayed list of mailboxes as a CSV file.

**Create new shared mailbox**

This button will open a new window allowing you to create a shared mailbox. The required fields are the “Display name” and the “Primary email address”, which must both be unique across Blue AD and Exchange Online. The domain for this address must be selected from a dropdown list which will contain only those domains available to the current institution.

The selected domain can be cleared by clicking on the dropdown list then tapping the backspace key.

If required, you can add additional email address to the mailbox. Click “Add address” then enter email address you wish to add. This address must not already exist, and the domain must be associated with the current institution.

Creating a mailbox will automatically create an associated access group named “Access group for <primary email address>”

By default, a mailbox will appear in the Global Address List. If you do not want this to happen, you can tick the box to hide it. Be aware that you will not be able to add the mailbox to Outlook if it is hidden.

Also by default, sent mail from a shared mailbox will be stored in the sending user’s mailbox, not the shared mailbox. You can tick “Retain sent mail in mailbox” to ensure that mail is kept within in the shared mailbox.

Once done, click “Create mailbox” to initiate the creation process. As the creation process involves various interactions with Microsoft’s cloud environment this may take an indeterminate amount of time to complete, so progress can be monitored by refreshing the mailbox list. Mailboxes being provisioned will be shown first in the list. Typically, a mailbox should be created within about 30 minutes after passing through nine processing steps, with steps 2, 5 & 8 taking the longest amount of time to complete.

**Delete selected mailbox**

When a mailbox is selected, this button will be available. Pressing the button will open a confirmation dialog, asking if you are sure you want to delete the mailbox. Choosing ‘Yes’ will do so as well as deleting the associated access group. **There is no undo function**. Choose ‘No’ to cancel the action.

**Edit selected mailbox**

When a mailbox is selected, this button will be available. Pressing the button will open an edit dialog, similar to the “Create new shared mailbox” dialog. You can then alter any aspect of the mailbox and click “Apply changes” to make the change permanent. An extra action available in this dialog is the ability to
choose any of the additional addresses and then “Make primary” to swap it with the currently configured primary address.

If you change the primary email address of the mailbox, the associated access group will be renamed to keep the naming scheme consistent.

**User information**

User information allows you to see basic information about a user account. You can determine when the password was last set and why a specified user has been given a particular EES license. Enter a CRSID, and click “Find”. For valid users, you will see the date of last password change, and the sequence of tests/checks that the licensing script has gone through to determine whether the user should have an EES license and, if so, whether it’s the staff or student version.

You can also see a summary of the institutional group memberships for this user. Double-clicking on a group will take you to the group membership dialog in the Groups tab.

**Audit**

The Audit tab displays a list of actions performed by users of Toolkit on objects that are associated with the currently selected institution. The most recent actions are listed first. You can search this list if required by applying a filter or “Export as CSV” as necessary. Double-clicking an entry will display additional information (in JSON format) detailing the specific attributes being changed.

**App Registration**

App Registrations are endpoints in AzureAD which are used to provide authentication for cloud applications. If you have previously requested an app registration you will be able to see the details of it here, by double-clicking on the entry.

Future versions of Toolkit will expand on this, and allow the self-service creation and editing of app registrations.

**Institution Configuration**

This tab provides access to multiple aspects of an institution within Blue AD.
Service Accounts are user accounts that exist within your institution’s “Accounts” OU. You would generally use a service account if you need BlueAD credentials for institutional servers hosted in Blue.

When you create a service account there are two naming options – a ‘service account’ is named ‘<institution>-<something>’ whereas an ‘admin account’ is named ‘<something>admin’. Other than the naming scheme there are no differences between the two.

In addition, if you have any shared mailboxes that you have requested login access for, then they will also appear in the list so that you can set the password.

Group Policy Objects

This is initial, basic, functionality for creating empty GPOs, after which management would need to be performed via standard Microsoft utilities. Please do not create GPOs without discussing your requirements with UIS first.

Resources

The Resources tab allows you to create and view room and equipment resources which can be used for booking purposes.

Administration

The Administration tab is visible to institutional administrators and provides a method of allowing access to Toolkit for other users. The left-hand pane shows a list of users who have been given access, and the right-hand pane shows which permissions those users have been granted.

To grant access to a user, click “Add user” then enter their CRSID. They will appear in the left-hand pane but will initially have no permissions. Choose the items in the right-hand pane that correspond to the set of permission you wish to grant, then “Apply changes” to set those permissions. That user will now be able to access Toolkit.

You can edit permissions by selecting any user in the left-hand pane and adjusting the settings in the right-hand pane (remembering to ‘Apply changes’ once done), or remove access for a user by selecting them in the left-hand pane and clicking ‘Remove user’.

Timeout messages

If your browser has been sitting with Toolkit open for some time then when you attempt to perform an action you may see the following message: “Your session has timed out. Click ‘Refresh’ to renew it.”
Clicking the ‘Refresh’ button will reload the webpage (and optionally request reauthentication via AzureAD if necessary).

### Other messages

When using Toolkit, you may see one or more of the following error messages:

**Message:** This email address is not valid for your institution.

**Reason:** Email addresses can only be applied if Toolkit believes they are associated with that institution. If you find you are unable to set an email address, please contact the Service Desk.

**Message:** This email address is not in a valid format. / The primary email address is not in a valid format.

**Reason:** The email address you entered is not in the form <localpart>@<domain>

**Message:** This email address has recently been used. Please try again in 30 minutes.

**Reason:** When an email address is removed or altered, the old value cannot be reused within 30 minutes due to synchronization delays between BlueAD and Azure.

**Message:** This email address is already in use elsewhere. / The primary email address is already in use elsewhere. / An additional email address is already in use elsewhere.

**Reason:** A different object in BlueAD already has this email address associated with it.

**Message:** This display name is already in use elsewhere.

**Reason:** Display names are visible in the Global Address List and therefore must be unique across all institutions.