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imc Learning Suite Email Configuration

imc Learning Suite Email Configuration Guide

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1 Introduction

The imc Learning Suite contains a large number of standard emails and configurable mail settings. This document will provide detailed overviews to explain all types of messages, the available settings and information on how to configure messages.

2 General email settings

This chapter identifies the different functions of the imc Learning Suite that contain settings related to email messages. These settings are not the email messages themselves, but more so the settings that control distribution and default values.

2.1 SMTP Server

A Simple Mail Transfer Protocol (SMTP) is used to allow the imc Learning Suite to send emails to external mail servers. With imc hosted Learning Suite solutions the SMTP server is normally provided by imc to allow customers to deliver emails without providing their own email client or server; in this case whitelisting of the imc SMTP server to relay emails is required. However, many customers do prefer to utilise their own SMTP server which is also supported for hosted solutions and mandatory for on-premise (customer hosted) solutions.

2.1.1 Whitelisting imc's SMTP server via SPF

When the imc SMTP server is used by a customer, whitelisting is required to ensure emails sent by the Learning Suite are not treated as SPAM. The whitelisting is basically an approval set in the customer's own mail server that allows the imc SMTP server to relay emails on behalf of their email domain or a select email addresses.

The Sender Policy Framework (SPF) is an open standard specifying a technical method to prevent sender address forgery. More precisely, the current version of SPF — called SPFv1 or SPF Classic — protects the envelope sender address, which is used for the delivery of messages.

SPFv1 allows the owner of a domain to specify their mail sending policy, E.g. which mail servers they use to send mail from their domain. The technology requires two sides to play together: (1) the domain owner publishes this information in an SPF record in the domain's DNS zone, and when someone else's mail server receives a message claiming to come from that domain, then (2) the receiving server can check whether the message complies with the domain's stated policy. If for example, the message comes from an unknown server, it can be considered a fake.

Example of SPF record:

This SPF record can be applied to customers as is (just replace domain.com with customer's domain name):

The best method is the include. This makes the maintenance of the Mail servers easier for Internal IT. For this simply add to the existing SPF include:spf.imc-hosting.com

See below two examples:

domain.com IN TXT "v=spf1 a mx include:spf.imc-hosting.com -all"

baumeracademy.com TXT "v=spf1 a mx include:spf.imc-hosting.com -all"

The customer is sending from the address: academy@baumeracademy.com

The parts of the SPF record mean the following:

domain.com	the domain which is used on Azure for ILS systems as email senders domains. If multiple domains are used then on each domain DNS zone have to add SPF record. No subdomains!
v=spf1	SPF version 1
a	The A record tag allows the SPF to validate the sender by domain name's IP address. If left unspecified, it takes the value of the current domain.
mx	the incoming mail servers (MXes) of the domain are authorized to also send mail for domain.com (If no mx Record exists in the Domain then the mx can be removed)
include:spf.imc-hosting.com	All Servers that are listed in the TXT-Record from spf.imc-hosting.com are allowed: mx1.imc-hosting.com (4.231.234.136) mx2.imc-hosting.com (4.231.171.210) mx3.imc-hosting.com (52.178.135.21) mx4.imc-hosting.com (20.107.242.47) hint: nslookup -q=TXT spf.imc-hosting.com
-all	all other machines are not authorized

If the client already has a SPF record on their domain they have to add the imc IP addresses and hostnames to their SPF record.

Example:

clientdomain.com IN TXT "v=spf1 mx ip4:1.1.1.1 a:mail.clientdomain.com include:spf.imc-hosting.com -all"

ip4:1.1.1.1 - is the client mx IP address

a:mail.clientdomain.com - is the client domain mx

include:spf.imc-hosting.com - DNS-Entry of Servers which they have to allow to send emails from our servers

Client can use this wizard to add needed information in his SPF record:

http://www.spfwizard.net/

After the includes have been added to the client SPF record, the PROD, STAGE and REF systems will be provisioned with the new email relay configuration. Customer needs to be informed about the downtime of the system during email server migration. Downtime will be around 30 minutes for each system.

2.1.2 Customer's SMTP in use

To avoid the need of whitelisting the imc SMPT server and to have greater control, imc customers are able to utilise their own mail servers for imc hosted solutions. If the customer opts to utilise their own mail server the relevant details such as hostname or IP and password (if required) must be provided to imc. These details can change depending on the setup required and the imc Learning Suite is quite flexible in supporting different setups. Customers hosting on-premise must use their own SMTP server.

2.2 Configuration: Communication/Mail

The 'Settings > Configuration > Communication/Mail' function is where default settings for system messages are configured. The settings entered here are configurable per environment (E.g. Prod, Stage, Ref) and are considered defaults as they can be further altered in the 'Client' function in the 'Email' tab.

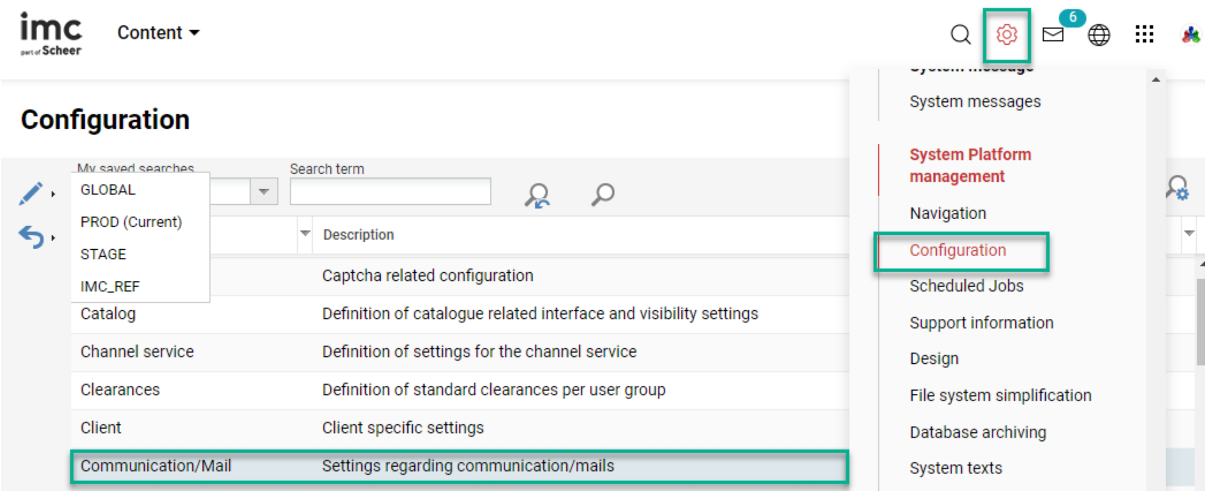


Figure 1: Configuration > Communication/Mail manager.

2.2.1 Description tab settings:

The settings in the 'Description' tab
strCommunicationConfigHint
From: This area defines system settings related to mailing and communication
To: This area allows configuration of system wide settings related to mailing and communications in either a Global or system specific (Prod, Stage, Test) context. Depending on configuration some of these settings can be overwritten in the Client function.

Forward internal mails: strOHCommunicationConfigForwardInternalMails (13989)
From: If "false", internal CLIX messages are, as a general rule, not forwarded via SMTP (regardless of other settings, e.g. at user profile or notification level).

To: If “unticked” messages are not forwarded via SMTP (regardless of settings in ‘EMAILFORWARD’ personal attribute or individual notification ‘Permit external forwarding’.) and will only be received to the internal ‘Messages’ inbox.

Test mode: strOHCommunicationConfigTestMode (13995)
From: TestMode for e-mails: If this value does not have a comment and is true, then the senders and recipients of all e-mails are set to testSender and testReceiver values. Deactivation of mailing test mode is only possible in the "PROD" context.
To: Test mode is used to control the sending and receiving of emails to single accounts for testing purposes. By default the ‘Test mode’ checkbox is ticked and can only be unticked for ‘PROD’ context where emails will then sent and received by intended email addresses.

Test receiver*: strOHCommunicationConfigTestReceiver (13996)
Recipient address in test mode: Address to which all e-mails are sent if ‘Test mode’ is active.

Test sender*: strOHCommunicationConfigTestSender (13997)
Sender address in test mode: Address from which all e-mails are sent if ‘Test mode’ is active.

Forward undeliverable mail: strOHSystenCommunicationSendUndeliverableMail (14480)
Controls whether e-mails which could not be delivered to their original destination will be delivered to the undeliverable mail recipient defined below.

Undeliverable mail recipient: strOHSystemCommunicationUndeliverableMailRec (14481)
Defines the e-mail address that will receive e-mails that could not be delivered to their original destination.

Mime type: strOHSystemCommunicationMimeType (14479)
Specifies the format in which the e-mail will be sent (Either plain text or html).

Mail sender address*: strOHSystemCommunicationMailSender (14478)
Defines the e-mail address that will be used as the sender when there is no sender information defined on client level.

Use system-wide sender for mails:
strOHSystemCommunicationUseSystemWideSenderForMails (14482)
Controls whether the system-wide mail sender will be used to send all personal e-mails, automated notifications, enrollment/cancellation mails and automated system e-mails. The setting is to prevent the LMS SMTP server relaying emails on behalf of all user accounts which reduces the risk of e-mails being treated as spam if proper whitelisting has not occurred; this setting is especially important where some course administrators might be external and the imc customer does not have control to whitelist the imc mailer server.

Deactivate information about email forwarding:
strOHSystemCommunicationUseSystemWideSenderForMails (14482)
Determines if the forwarded internal message in the corresponding SMTP email will indicate the message has been forwarded.

Number of recipients of externally forwarded internal messages (6 characters max):
strOHSystemCommunicationUseSystemWideSenderForMails (14482)
Restricts the number of recipients of externally forwarded internal messages (i.e. how many email addresses can be packaged in one mail). Note: If the value is greater than 1, it is possible in the case of an undeliverable message that the message will not be sent to the remaining recipients.

SMP sent-by address: strOHCommunicationConfigForwardSenderEmailAccount (13990)

Determines the SMTP sent-by address under which all internal messages are forwarded to an external address. The displayed value "original" causes the forwarded message to retain the original sender; E.g. enrolment message triggers that are to be sent by the Course administrator.

Mail monitor staggering amount: strOHCommunicationConfigMailMonitorStaggeringAmount (13992)
Determines the number of e-mails which are sent via MailStaggeringJob per dispatch interval. If the parameter is defined with 0, no staggering takes place. Staggering large numbers of emails is beneficial to improve deliverability and decrease chance of emails being treated as spam. Requires 'MailMonitorStaggering' schedule cron job to be active.

Hide recipient list: strOHCommunicationConfigHideRecipientList (13991)
Determines if display of direct recipients of an internal message and a list of CC recipients will be prevented from user, unless user is the sender of the message. Replies to the message show neither recipients nor CCs in the message body that includes the text of the original message.

Number of days after which mail monitor messages will be deleted by cron job (6 characters max.): strOHCommunicationConfigDeletionAfterNumberOfDays (13986)
Defines the number of days after which mail monitor messages will be deleted by cron job (with reference to the date the message was sent). Requires 'CleanUpMailingNotificationMonitor' scheduled cron job to be active.

Email address for user feedback (100 characters max.): strOHCommunicationConfigFeedBackEmailAddress (13988)
Recipients email address to receive messages sent from users via the 'Feedback' (167) panel that can be added to dashboards.

Send feedback message anonymously: strOHCommunicationConfigFeedbackAnonymous (13987)

Determines if feedback messages will be sent personally or anonymously. True: Sending will be done anonymously. False: Feedback messages will contain personal information (Name, Company, address).

7 bit transfer encoding for SMTP messages:
No 'I' icon – create PDOC
Data consists only of US-ASCII characters, that only use the lower 7 bits for each character, to guarantee that all of the bytes in the content already adhere to the restrictions of SMTP; therefore, requiring no special treatment from external SMTP for faster processing.

Service backend: strOHCommunicationServiceBackend (13998)
Configures automatic mail sending options for the system log data from in the service backend.

Email: strOHCommunicationServiceBackendEmail (14000)
E-mail address sets the recipient of a daily email containing the previous days system log file that can otherwise be downloaded via the 'Support information' function. The log file contains traces of transactions and errors to help identify potential issues.

Attachment limit: strOHCommunicationServiceBackendAttachmentLimit (13999)
Maximum size of a log file (in MB) to be sent from the service backend. The default is set to 1MB which may need to be increased for systems with large amounts of daily transactions.

2.2.2 E-mail addresses Tab

The ‘Email-addresses’ tab is where recipient email addresses for various general system messages such as log files or other alerts are set. The email addresses entered here are the defaults that can be overwritten in the ‘Clients’ function in the ‘E-mail addresses’ tab.

Email address upon rejection of terms of use or privacy policy (100 characters max.): strOHDeclarationManager (14132)
Recipient of system e-mails that are generated when people register and do not accept the general terms and conditions. This setting serves as the default for the setting in the client.

Email address for the enrollment of users (100 characters max.): strOHstrOHRegistrationManager (14447)
Recipient of system e-mails from registering people. This setting serves as the default for the setting in the client.

Email address for license manager (100 characters max.): strOHLicenseManager (14209)
Recipient of system e-mails from the license manager. This setting serves as the default for the setting in the client.

Email address for user import log file (100 characters max.): strOHPersonBulkImportLogFileManager (14328)
Recipient of system e-mails during a timed person import. This setting serves as the default for the setting in the client.

Email address for group import (100 characters max.): strOHGroupBulkImportLogFileManager (14187)
Recipient of system e-mails during a timed group import. This setting serves as the default for the setting in the client.

Email address for batch assignment of users to groups, courses and clients (100 characters max.): strOHAssignmentImportLogFileManager (13827)
Recipient of system e-mails that are generated when importing lists in connection with assigning people to groups, courses or domains. This setting serves as the default for the setting in the client.

Learning plan manager (100 characters max.): strOHLearningPlanManager (14207)
Recipient of e-mails with log files from automatic target group building and registration batch job.

XML groupimport manager (100 characters max.): strOHXmlGroupImportManager (14582)
Recipient of system e-mails from group import (BU). This setting serves as the default for the setting in the client.

2.3 General Email Settings in Clients function

The ‘Clients’ function allows many of the general system emails and workflows to be configured per client. This includes updating default recipients for general system messages as defined in ‘Settings > Configuration > Communication/Mail’ and activating workflows such as sending emails for new accounts with access credentials. To configure client specific email settings the selected Client needs to be edit in the ‘Global’ context.

2.3.1 E-mail addresses tab

In the 'E-mail addresses' tab are two sections which are 'Sender's e-mail address' and 'Recipient of system emails'.

The four fields in the 'Sender's e-mail address' are used to adjust alter details of enrolment messages and notifications for trainings delivered by Providers that have been linked to the Client. While it is possible to configure Provider specific Enrolment Messages (triggers & texts) and Notifications with the same fields manually populated, it is much easier updating the four fields and the Learning Suite will automatically adjust the details on standard mails when a Provider linked to a Client is detected. Descriptions of each field are below:

- 'Sent by' is used to specify the email address for the message sender which will overwrite the sender configured in the standard Enrolment Messages and Notifications; E.g. CustomerSuccess@im-c.com instead of Administrator email or generic LMS address.
- 'Sent by alias' is used to display the name of the sender instead of the email address; E.g. imc Customer Success team.
- 'Reply to' changes the email address if recipient chooses to reply to the email.
- 'Undeliverable' sets the email address to receive a notification if an Enrolment Message or Notification is not successfully delivered to the intended recipient.

The 'Recipient of system e-mails' section contains matching recipient fields to the defaults configured in 'Settings > Configuration > Communication/Mail'. If values are defined in the Client then these will take precedence over the default values. In the case of a multi-client system multiple receivers can receive generic emails such as log files.

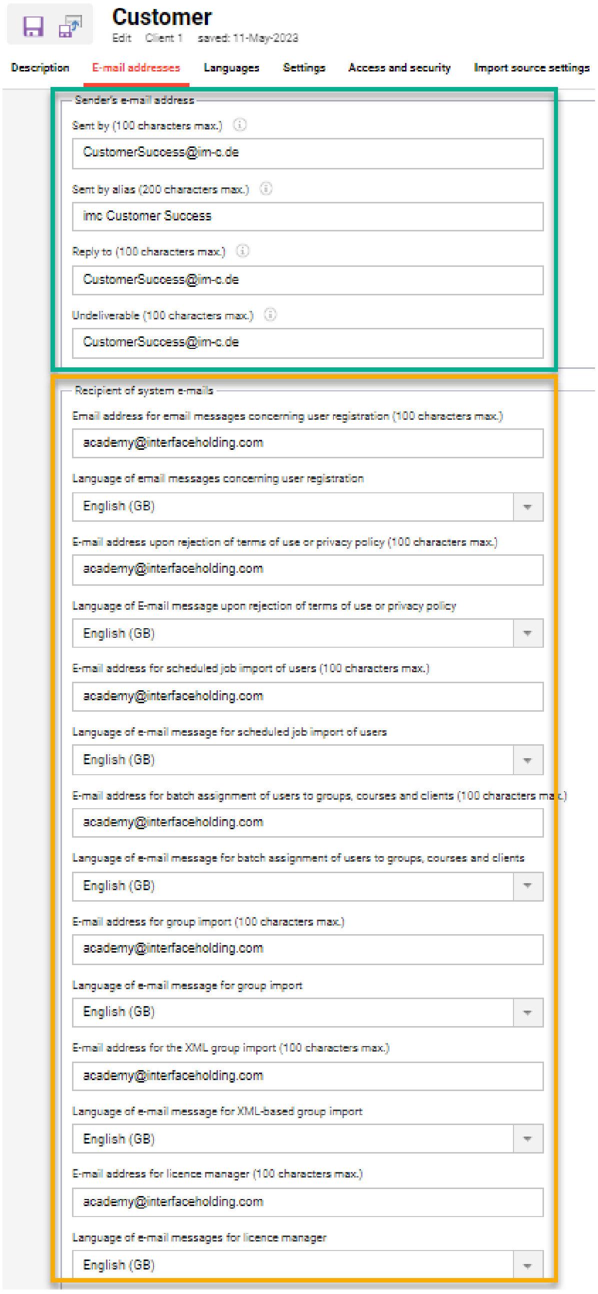


Figure 2: Client system email recipients

2.3.2 Settings tab

In the 'Settings' tab there is one email related setting which is 'Enable mail sharing'. When ticked the logged in user will have a 'Share this course' option on Course Description pages, normally accessed via the catalogue, with ability to 'Copy the link to the clipboard' or 'Share this course'. The latter requires email addresses to be directly entered with multiple possible via comma separation and the LMS will send the recommendation. Ability to access the Course Description page will be determined by Clearances and would require an account to exist or be created.

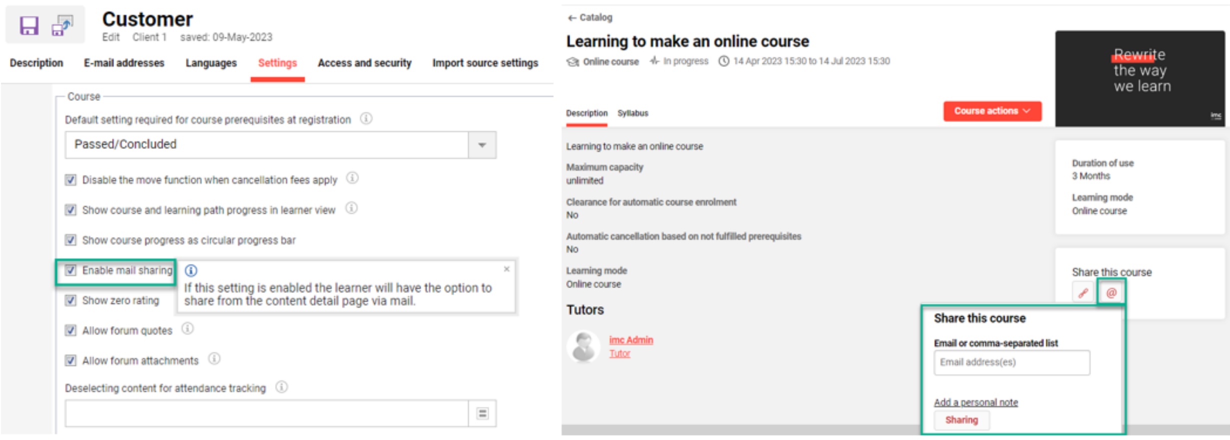


Figure 3: Client email setting to 'Enable mail sharing'.

2.3.3 Access and Security tab

There are three email related settings in the Clients 'Access and security' and these are important settings with account creation.

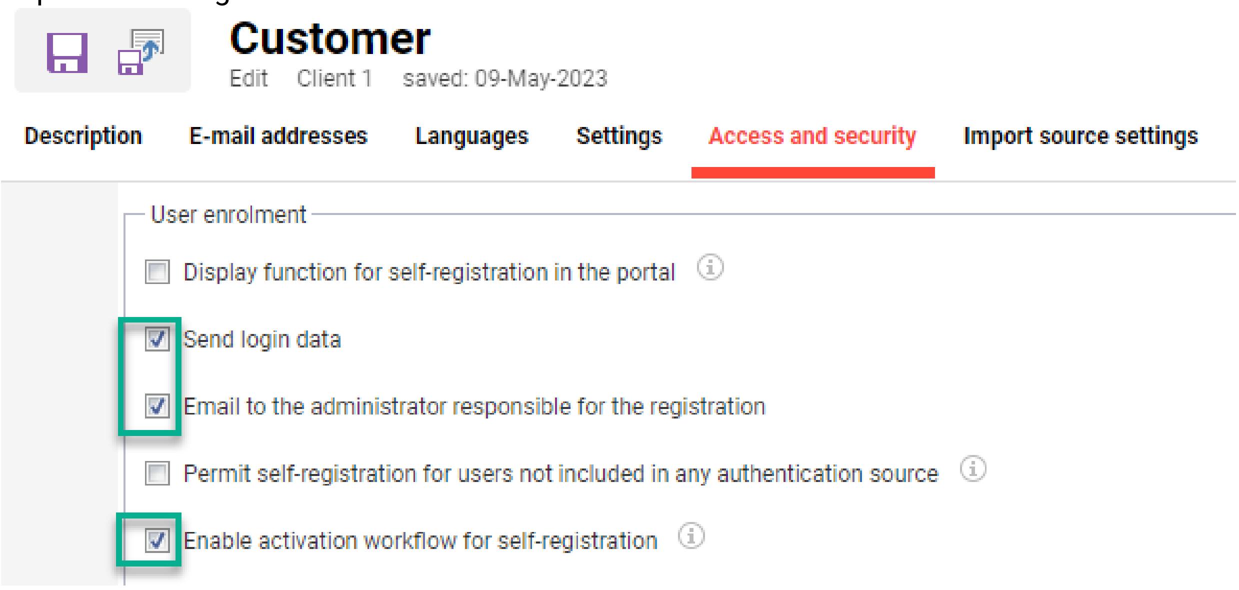
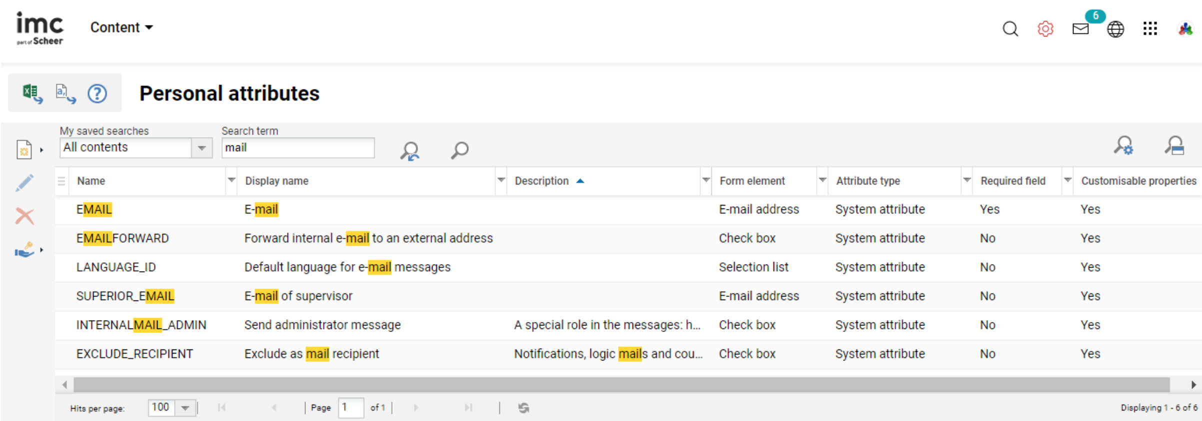


Figure 4: Client email setting related to account provisioning.

- 'Send login data' when ticked sends an email to the new user with a welcome email and local access credentials (username and password). The email is controlled by a System text (ID 70002) and is only triggered if a generator is used to create either the Login or Password. For systems or Clients where all users will use a form of single-sign-on to access the system this option is often deactivated.
- 'Email to administrator responsible for the registration' when ticked sends an email alerting of the new users account registration which can also contain their local access credentials (username and password). The recipient of the email is defined in the 'E-mail addresses' tab field 'E-mail address for email messages concerning user registration'.
- 'Enable activation workflow for self-registration' sends a verification email to new users who sign up for an account. The account will only become active once the verification link in the email has been clicked; alternatively an administrator may manually approve.

2.4 Email related Personal attributes

When configuring general email settings there are some Personal Attributes to consider. In the 'Personal attributes' function enter the search term 'mail' to return all email related user attributes.



Name	Display name	Description	Form element	Attribute type	Required field	Customisable properties
EMAIL	E-mail		E-mail address	System attribute	Yes	Yes
EMAILFORWARD	Forward internal e-mail to an external address		Check box	System attribute	No	Yes
LANGUAGE_ID	Default language for e-mail messages		Selection list	System attribute	No	Yes
SUPERIOR_EMAIL	E-mail of supervisor		E-mail address	System attribute	No	Yes
INTERNALMAIL_ADMIN	Send administrator message	A special role in the messages: h...	Check box	System attribute	No	Yes
EXCLUDE_RECIPIENT	Exclude as mail recipient	Notifications, logic mails and cou...	Check box	System attribute	No	Yes

Figure 5: List of email related Personal attribute settings

Each Personal attribute related to emailing is described below:

- 'E-mail' is the primary email address of the user and is where all default emails would be sent. By default this is a mandatory attribute, but if needed can be made optional.
    - Further email attributes can be configured if more than one is needed; E.g. Secondary email, SMS email, Emergency contact email. Any additional email can be configured as a recipient of emails/
- 'Forward internal e-mail to an external address' must be ticked for the user to receive emails to their external email client inbox; E.g. Outlook. If not ticked emails are only accessible via the LMS inbox.
- 'Default language for e-mail messages' determines the language of the email the user will receive if the email is available in that language. In multi-language systems this is an important setting and often rules are written to automatically set a language based on international location. Otherwise, a default language is set to be automatically applied to all users who can then update language preference in their user profile.
- 'E-mail of supervisor' does not allow any specific settings, but it is functional to establish a supervisor to staff relationship that provides the supervisor visibility of their staff and approval links.
- 'Send administrator message' when ticked allows the user to directly email more than one user at a time in the LMS; E.g. a course administrator or trainer might require this to email multiple participants of a course ad hoc emails.
- 'Exclude as mail recipient' when ticked will result in notifications, learning logic and course registration mails only being accessible by the internal mail monitor, but not sent to intended recipient.

2.5 Email meta tags

There are some email settings controlled by meta tags that can be added to media, courses and learning path object types. These fields can be found in the 'Meta tags' function by searching for 'Mail' or 'Message'. Unlike personal attributes there is no default values that can be set for meta tags, but only whether the status is 'Active' or 'Inactive'; instead default values are defined in the Media type, Course type and Learning path type objects.

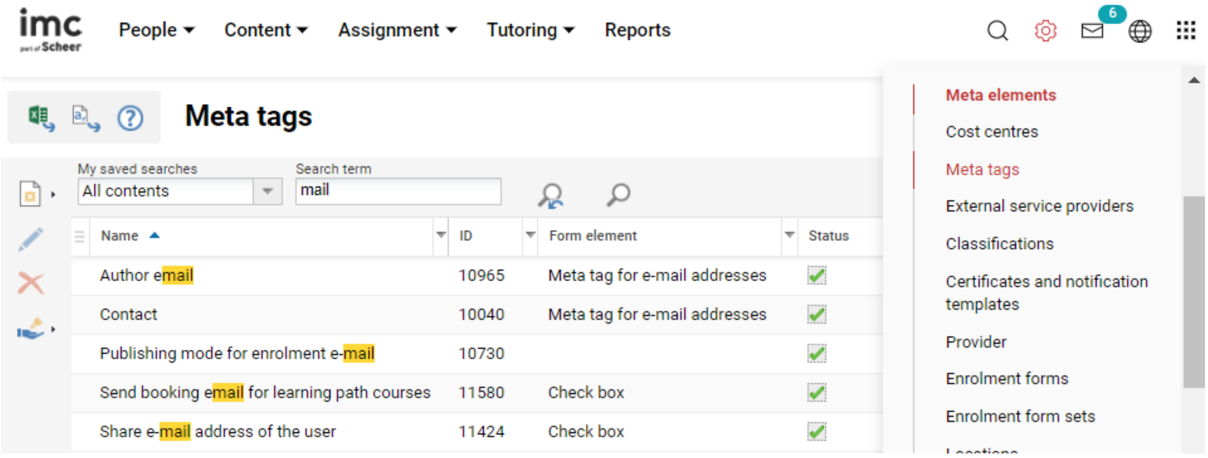


Figure 6: List of email related Meta tag settings.

Each meta-tag is described below:

- 'Send enrolment messages' (10132) when ticked sees enrolment messages and course notifications sent to learners, their supervisors, and course administrators. The enrolment messages send in real time based on enrolment status changes; whilst notifications can also be sent real-time on changes or via scheduled jobs with time-based triggers such as reminders.
- 'Send booking email for learning path courses' (11580) determines if individual enrolment messages will be sent to learning path participants for courses where enrolment was due to an automatic workflow in a learning path. This setting can therefore overwrite meta-tag 'Send enrolment messages' (10132).
- 'Publishing mode for enrolment e-mail' (10730) is a functional field available for courses that is hidden by default and if needed must be added to course types. This optional course meta tag can be used as a 'condition' for enrolment message triggers. The default value is 'Not defined' which matches standard enrolment message triggers; so if changing to 'Enrolment e-mail for initial publication' or 'Standard enrolment e-mail' then enrolment message triggers will require updating.
- 'Author email' (10965) is a non-functional field for capturing the email address of the contact who authored a media item. If the meta-tag is enabled to be displayed to the user in the media information then the email will be clickable.
- 'Contact' (10040) is a non-functional field for capturing the email address of the contact for a course template, course or media item. If the meta-tag is enabled to be displayed to the user in the media information then the email will be clickable.
- 'Share e-mail address of the user' (11424) relates to LTI media types and determines whether the e-mail address of the learner is given to the LTI content provider when opening the tool.

2.6 User list settings

The 'User lists' function is generally where personal attribute filters and columns for all functions and on-screen reports that show user data are configured. One additional setting in the 'User lists' function is the ability to set with it will be possible to email selected users directly using the 'Send e-mail' button at the bottom of the screen.

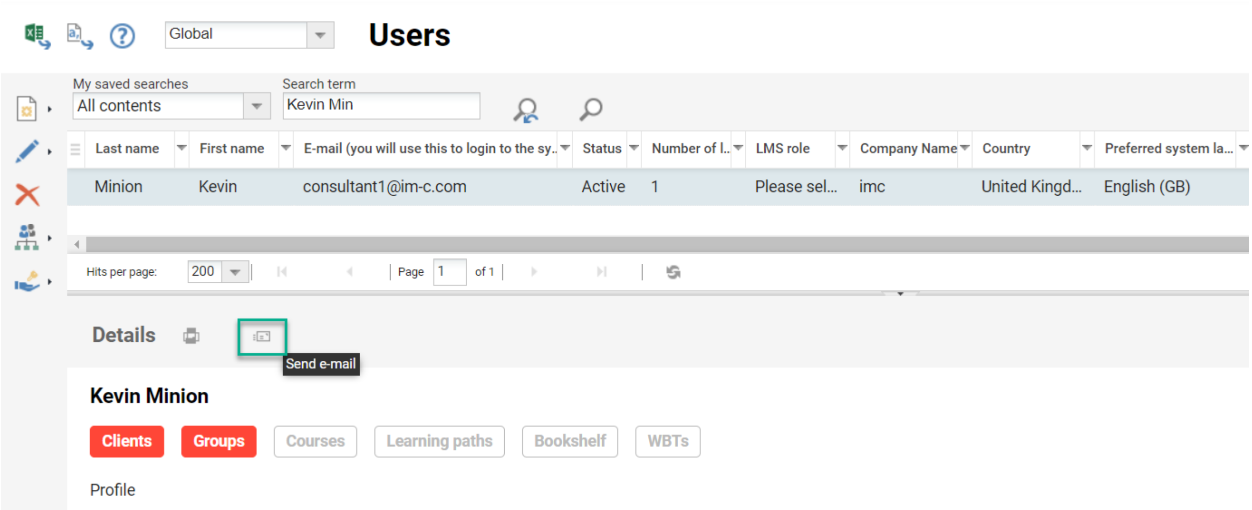


Figure 7: Button to directly 'Send e-mail' to selected users.

The 'User lists' function allows for the 'Send e-mail' button to be activated or deactivated per function. This is done by editing the relevant user list, possibly considering client context if a multi-client system, and then in the 'Viewing options' tab changing the 'Send e-mail' checkbox.

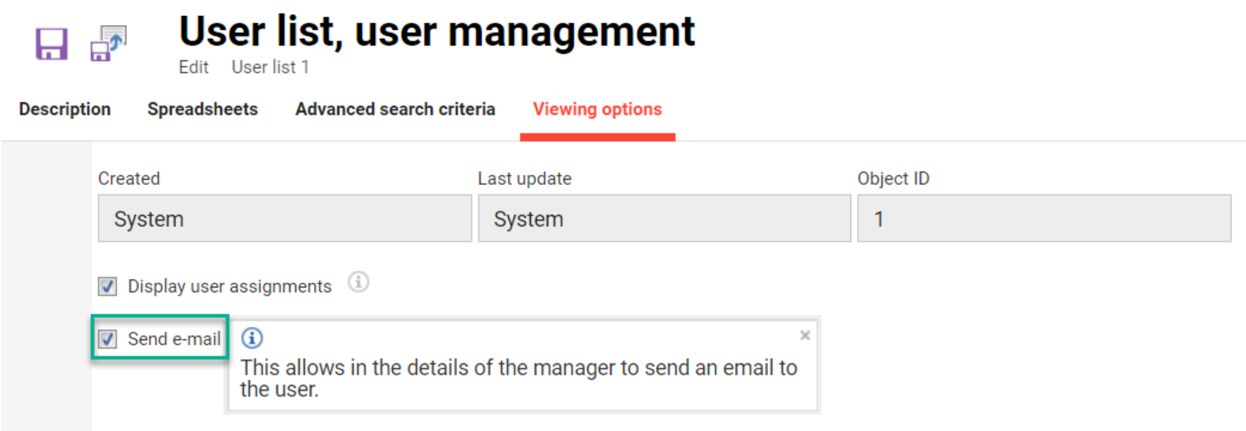


Figure 8: Configuring the 'Send e-mail' button in a user list.

3 System text 'Account' emails

All emails that are sent by the LMS relating to user account creation or account information updates are configured in the 'System texts' function. Given the large number of system text wording bundles, the best way to directly identify system text bundles related to account email messages is to enter the search term 'contenttemplate700'. It is additionally possible to reduce the displayed bundles to only email related using the 'Type' filter and selecting 'Enrolment messages', but this will return many bundles related to enrolment messages and there is a better alternative to edit these.

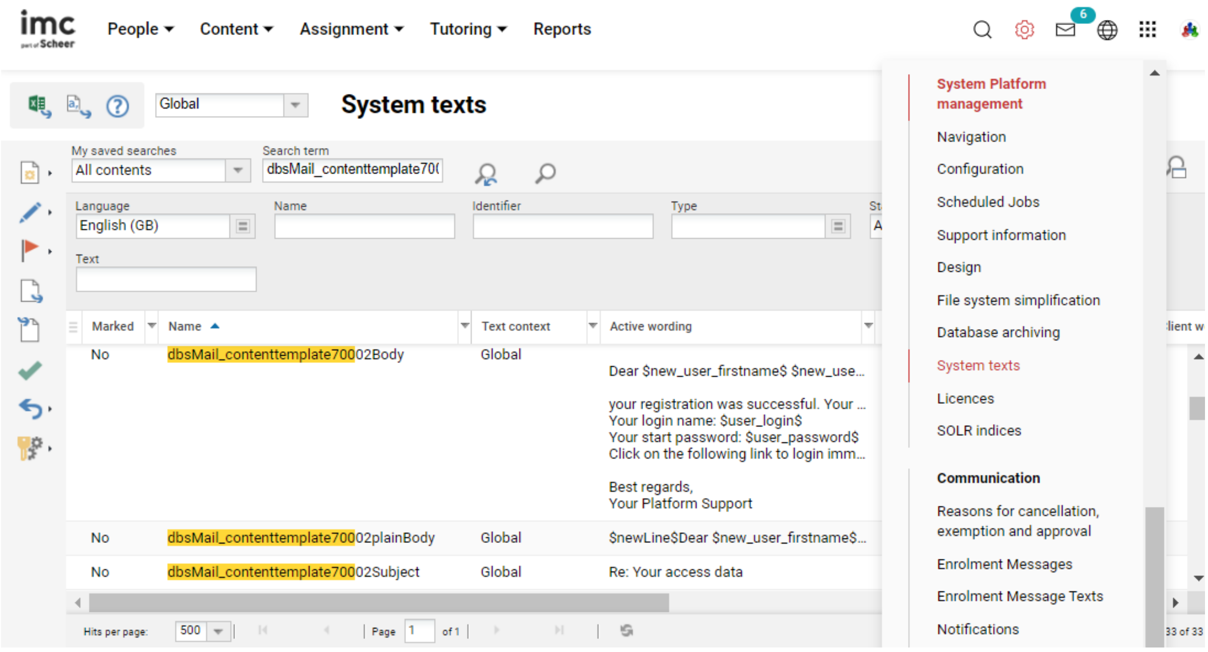


Figure 9: System texts related to account credential emails.

There are 33 bundles where the bundle name contains 'contenttemplate700' and this equates to 11 emails as each has a bundle for Subject, HTML body and Plain text body.

The key system text emails related to account creations and updates are described below:

- 70002 – Welcome email with access data for new users that is sent when 'Send login data' checkbox in Client function is ticked and either the Login or Password has been generated by the LMS. This global for all clients and if needed attribute variables can be included to personalise the emails further.
    - Subject: Your access data

- 70003 – Change of credentials email triggered to a user if their local password has been changed with one generated by the system. Most commonly this is sent when a user forgets their password and an administrator manually resets by deleting and saving to automatically generate a new password.
    - Subject: New password

- 70000 – New account request email to sent to recipient in 'Email address for email messages for user registration' field in the Client 'E-mail addresses' tab. The email is purely for information and the administrator would need to log into the LMS to approve the account.
    - Subject: Registration of a new participant

- 70001 – No licences available email to the licence manager recipient in 'E-mail address for licence manager' field in the Client 'E-mail addresses' tab.
    - Subject: User licence

- 70004 – Privacy policy rejection email sent to the recipient in 'E-mail address upon rejection of terms of use or privacy policy' field in the Client 'E-mail addresses' tab. This email is important for organisations that use the LMS Privacy Policy feature because if a new user rejects the Privacy Policy on first login then the account is made 'Passive' meaning the user will be unable to login.

  - Subject: Rejection of privacy policy

- 70005 – Change of credentials email triggered to a user if their login has been changed. This would be less common than the email sent with 70003 for password changes.
  - Subject: New login name

- 70006 – Account activation email reminder containing a link to confirm the account which relates to the 'Enable activation workflow for self-registration' checkbox in the Client 'Access and security' tab. This email is for security to confirm email address of a self-registered user is correct and the account will remain with a Passive status until the link is clicked.
  - Subject: Activating your login information

- 70007 - Account activation email containing a link to confirm the account which relates to the 'Enable activation workflow for self-registration' checkbox in the Client 'Access and security' tab. This email is for security to confirm email address of a self-registered user is correct and the account will remain with a Passive status until the link is clicked.
  - Subject: Activating your login information

- 70008 – Account confirmation email sent to recipient in 'Email address for email messages for user registration' field in the Client 'E-mail addresses' tab when a self-registered user confirms their email (70006, 70007).
  - Subject: Registration request $new_user_firstname$ $new_users_lastname$

- 70009 – An older email used in an ILS2013 backend 'Forgot your login' workflow. This has never been supported in ILP and therefore not used in ILS14.
  - Subject: Your login name

- 70010 – Essentially a duplicate of 70006 reminder email to a newly self-registered account to confirm their email address when the email activation workflow is enabled.
  - Subject: Activating your login information

Each of the bundles can be edited separately to make changes, but it is important not to directly Edit and Save any bundle that commences with <html> tags as an active HTML sanitizer will remove all <html> header tags for security reasons and will results in non-recognised HTML in the email. If needing to update system text bundles that contain <html> tags this can be done in two ways.

1) Use the System text 'Export' function to export a zip file containing a .txt file normally named 'exp_##-##_YYYYMMDD' where ##-## is the language code. To do so, firstly mark the bundles you would like to change using the 'Flag > Set flag' icon. Once marked click the 'Export' icon which will launch a popup window. If there are existing bundle changes it is best to use the 'Active wording' option to export wording currently in use and to reduce the amount of bundles in the file select 'All marked bundles', then click the 'Export' button to generate the zip file. Updating the wording then requires extracting the .txt file from the .zip file, making the changes to the bundles in the .txt file and saving using a 'Save as' to rename from 'exp_' (short for 'Export') to 'imp_' (short for 'Import'). Use the 'Import' icon to import the newly updated .txt file and then click the green tick

‘Activation’ icon to complete the update.

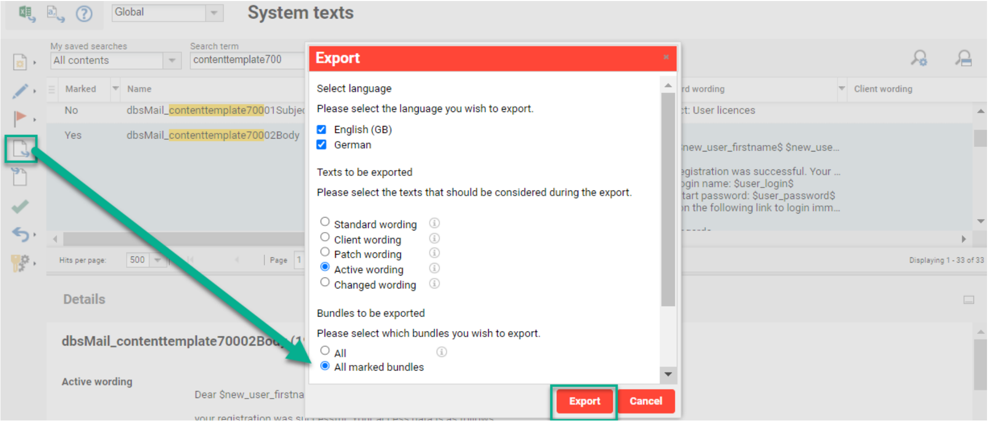


Figure 10: Exporting marked System texts wording bundles.

2) In order to make changes to system texts with <html> tags directly in the GUI and retain the <html> will require contacting imc Support to request the HTML sanitizer settings to be temporarily lowered. The image below is an example of how <html> tags can be stripped out of a system text when saving if the HTML sanitizer is active.

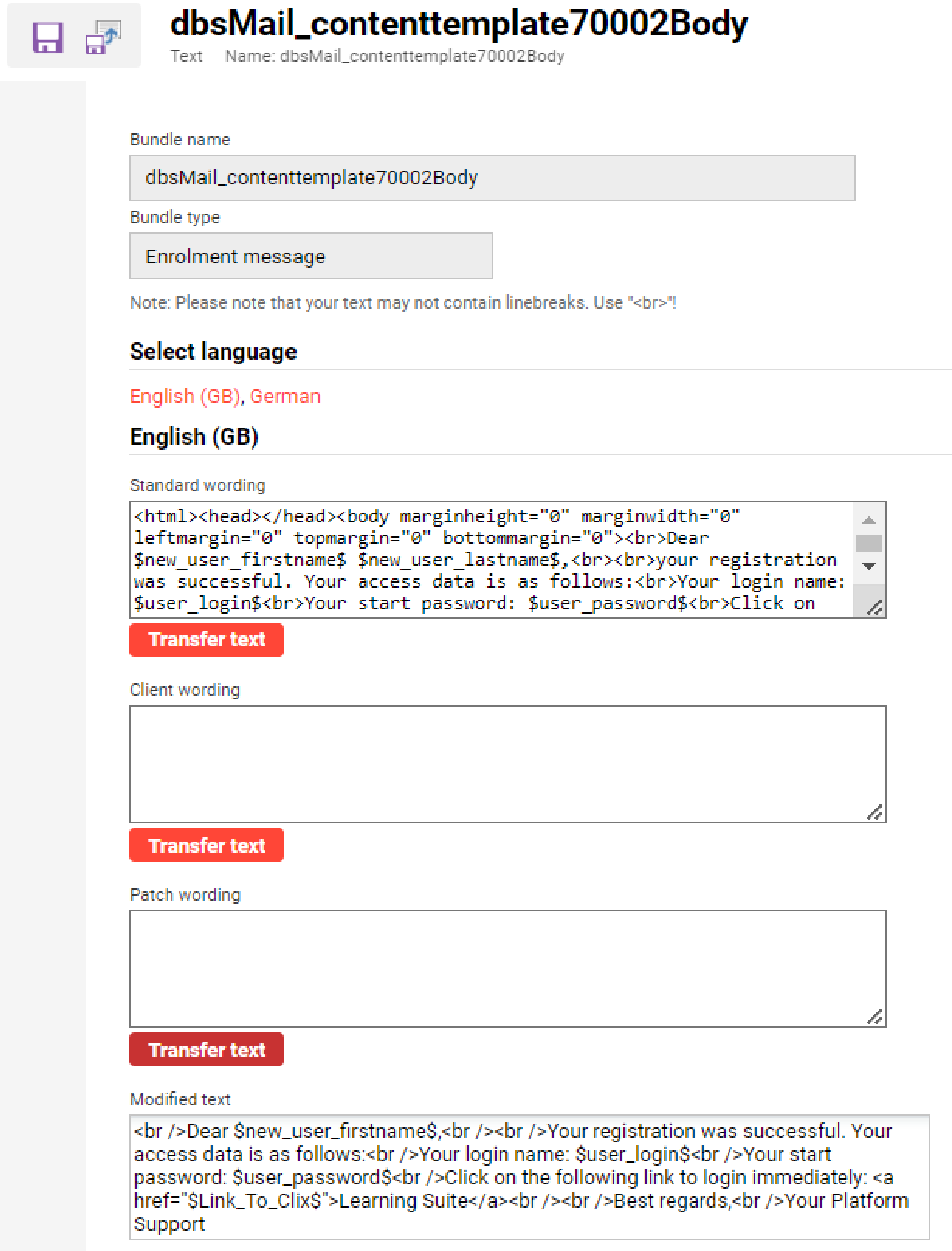


Figure 11: Example of saving <html> system texts when HTML sanitizer is active.

4 Enrolment messages

Enrolment messages are emails that can be triggered any time a user's enrolment status for a course, course template or learning path changes. These emails are completely configurable in terms of the email text and the trigger conditions.

4.1 Enrolment Message Texts

The 'Email Message Texts' function is where the email templates containing the email subject and body content are configured. As standard there are just over 50 enrolment message texts which are all completely configurable and more can be created from scratch or via duplication if needed. In the 'Enrolment Messages Texts' function a preview will automatically display at the bottom of the page when a single enrolment message text is highlighted. The Preview provides a good indication of the email layout and the information that is contained within. The clever use of variable placeholders ensures that the enrolment message texts are personalised with dynamically updated training and participant information; in the example below the vari able placeholders can be identified as they are surrounded by '$' characters.

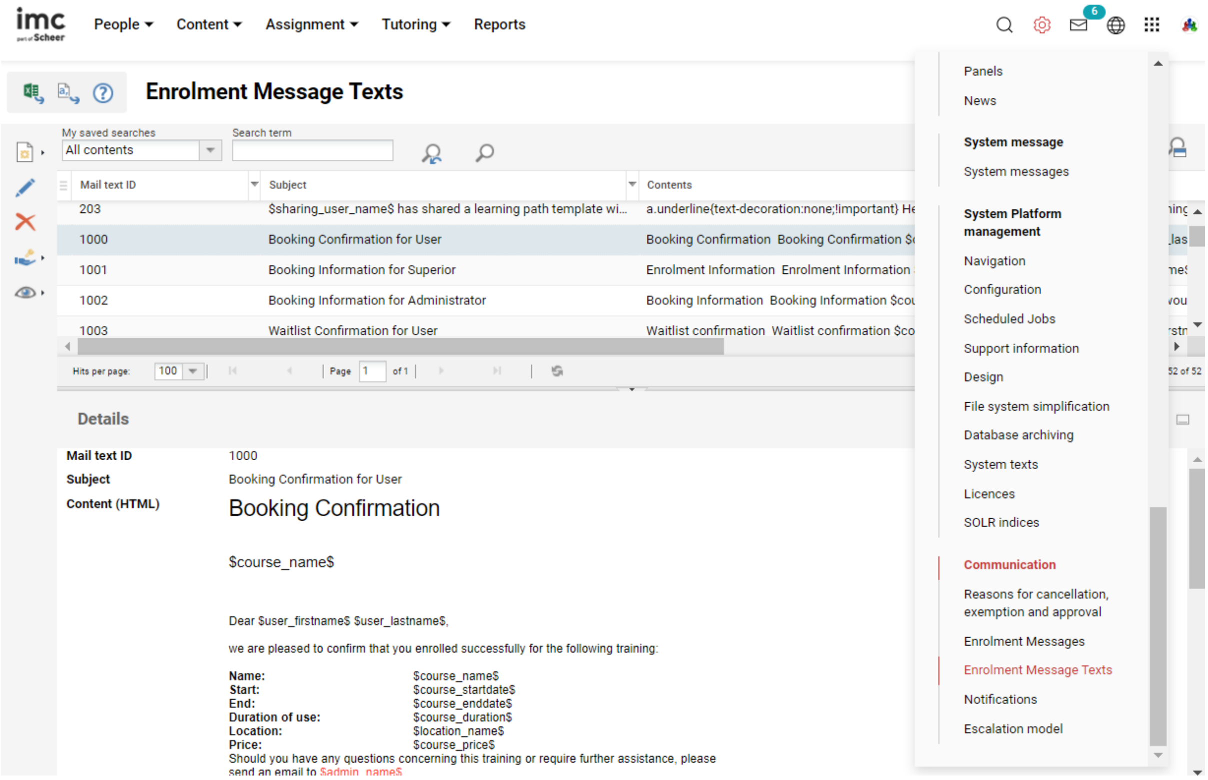


Figure 12: Enrolment message texts function for booking email templates.

Within each message template are 'Subject' and 'Content' fields (HTML and Text) for each activated system language. On the right-hand side are folders that contain the variable placeholders that are used to dynamically update the message content with specific details of the training or participants. To insert a variable place the cursor in the desired spot within the field and then click on the desired variable in the folder.

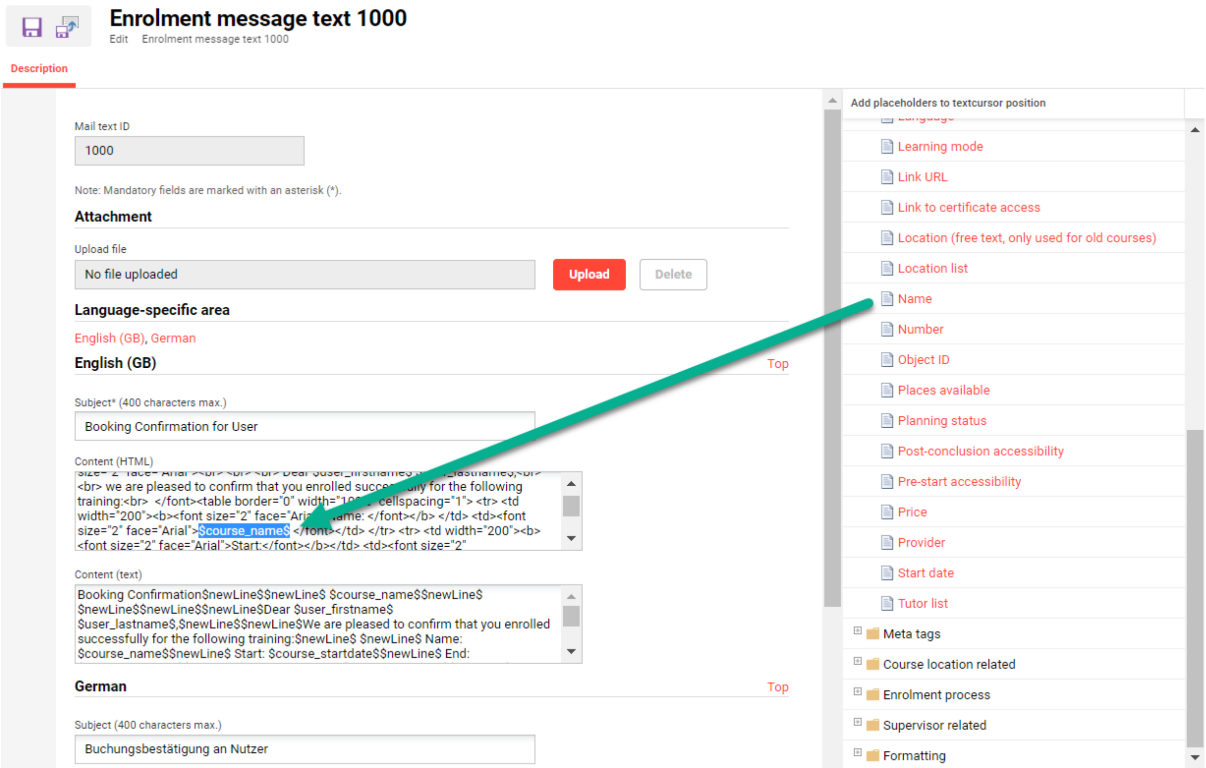


Figure 13: Example of using variable placeholders in Enrolment messages.

Once changes are complete, click 'Save' and the changes will take effect immediately.
Some of the more commonly sent message text templates are:

- 1000 – Booking Confirmation for User
  - Condition: Generally sent to participants to advise them of successful self-enrolments to courses.
- 1001 – Booking Information for Superior
  - Condition: Sent to Superior (email relationship) and BU Supervisors to inform of the staff member training enrolment.
- 1013 – Information on Confirmation Request for Superior
  - Condition: Sent to Superior (email relationship) and BU Supervisors to request first approval confirmation a two-step approval workflow.
- 1019 – New Booking Request for Administrator
  - Condition: Sent to Course Administrator (meta tag 10007) to approve the participant self-enrolment request.
- 1022 – New Booking Request for User
  - Condition: Sent to Participant to confirm if they can attend a training where they have been Third Party enrolled and training has 'Third party with confirmation'.
- 1040 – Booking Confirmation for User
  - Condition: Very important as sent to Participant after a Third-Party enrolment has occurred either by Administrator, Superior/Supervisor or automatic enrolment workflow.
- 1058 – Confirmation request for administrator
  - Condition: Sent to Superior (email) and BU Supervisors to approve a request when workflow is 'Enrolment request with direct enrolment by supervisor'.
- 1059 – Enrolment request to supervisor
  - Condition: Sent to Superior (email relationship) and BU Supervisors to request first approval confirmation a two-step approval workflow.
    - Similar to 1013 which has no standard triggers.

- 2000 – Request for an external course to superiors
  - Condition: Sent to Superior (email) and BU Supervisors to request approval for external course created by their staff member from an external course template.
    - Can be past for recording (E.g. for certification points) or for requesting to attend a future training event not delivered by their own organisation.
- 2001 – Request for an external course to the administrator
  - Condition: Sent to Course Administrator (meta tag 10007) to request approval for external course created by their staff member from an external course template.
    - Can be past for recording (E.g. for certification points) or for requesting to attend a future training event not delivered by their own organisation.

4.2 Enrolment Messages (triggers)

The ‘Email Messages’ function is where the triggers are configured to send enrolment messages. This is a highly detailed configuration area with over 2000 standard enrolment message triggers and the possibility create more individually or duplicate the entire set (E.g. for Provider specific messages). The large number of triggers to send 50 enrolment message templates is due to the amount of different conditions that can be considered. For example, in the standard set there are considerations for 20 enrolment statuses, 6 enrolment types, how enrolment change was triggered (learner, manager, admin, automatically), training type (course or learning path) and the recipient; However, further options such as ‘Training mode’ and ‘Provider’ can grow the number of triggers very quickly.

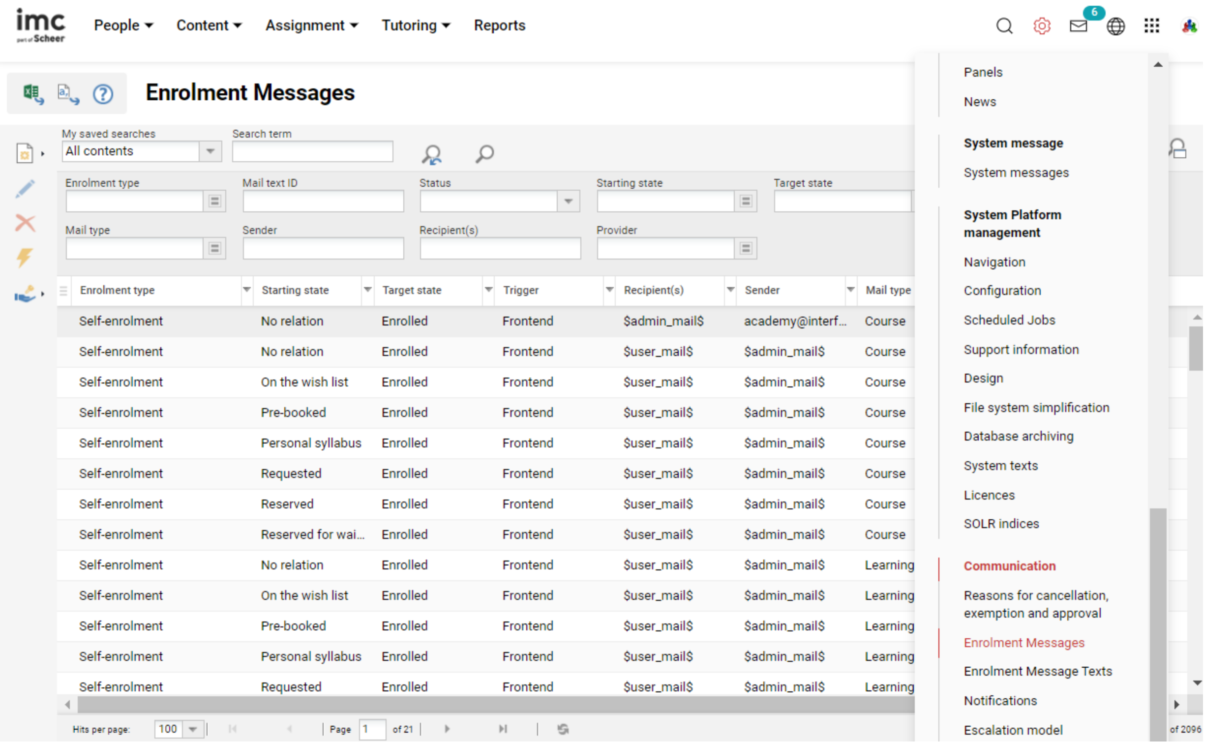


Figure 14: Enrolment message function for booking email triggers.

In this function the ‘Extended search’ search is very valuable in determining whether there is an active trigger for a certain condition or to identify under which circumstances a specific ‘Mail text ID’ (Enrolment message text) is sent. The screenshot above shows filter options for an extended search and below are descriptions of each filter:

- Enrolment type: Relates to meta tag 10008 that determines the enrolment workflow selected for courses and meta tags.

- Mail text ID: Object ID for the email template in 'Enrolment Message Texts' function.
- Status: 'Active' or 'Inactive' status of the Enrolment Message triggers.
- Starting state: Enrolment status of the user for the training before the change occurred. 'No relation' means they had no existing status to the training. Approximately 20 statuses.
- Target state: Enrolment status of the user for the training after the change occurred.
- Trigger: How the change occurred.
  - Backend: By administrator or automatic course enrolment workflow.
  - Frontend: By participant self-enrolment.
  - ERP interface: By an API from another system.
  - Supervisor: By Supervisor via Catalogue, My Staff or Approval.
  - Learning path auto-booking: Checkbox in Learning Path syllabus is ticked.
  - Automatic cancellation due to unfulfilled prerequisites: By scheduled cron job.
  - Automatic cancellation for inactive users: By scheduled cron job.
- Mail type: Type of training object; E.g. Course, Course template or Learning path.
- Sender: Who mail will be sent by. Can be manually entered email or standard options:
  - $admin_mail$ will be Course Administrator set in meta tag 10007.
  - $superior_mail$ will be the participant's Superior (Email).
  - $tutor_mail$ will be from a course tutor (can be multiple).
  - $user_mail$ will be the participant who's enrolment has changed.
- Recipient(s): Who mail will be sent to. Can be manually entered email or standard options:
  - $admin_mail$ will be Course Administrator set in meta tag 10007.
  - $superior_mail$ will be the participant's Superior (Email) or BU Supervisor.
  - $tutor_mail$ will be the course tutors with 'Email' checkbox ticked.
  - $user_mail$ will be the participant who's enrolment has changed.
- Provider: Course or Learning Path Provider defined in meta tag 10069.
- Learning mode: Optional filter. Value is set in Types and Templates 'Description' tab.

In an out of the box configuration the majority of the standard Enrolment Message triggers are 'Inactive' and will need to be set 'Active' if desired. This can be done manually by editing the triggers individually or if desiring all to be 'Active' you can request this in an imc Support ticket to be done via script.

4.2.1 Creating or Editing Enrolment Message Triggers

When creating or editing Enrolment Messages there are four tabs with settings to populate as explained in the following:

1) <u>Description</u>: Where general distribution settings are applied including:
   - Mail type: Set if trigger is for a Course, Course template or Learning path.
   - Dispatching mode: 'Send messages automatically' sends in real time, while 'Send messages manually (Administrator has to unlock the messages)' must be actioned manually in the Course or Learning Path 'Message monitor'.
   - Recipients: Determine who will receive the email. It is also possible for additional email attributes to be created for user profiles and all will be selectable here and in the CC area. 'E-mail' allows setting a fixed recipient.
   - CC: Determine who will receive the email as a carbon copy. The option 'Send the registration to the supervisor's e-mail address at the following levels' refers to a user's supervisors in a BU group structure.
   - Sender: Determines on who's behalf the email will be relayed as the sender.
2) <u>Conditions</u>:
   - Enrolment type: Only sends for trainings that have selected value.
   - Starting state: The enrolment status of user before the change.
   - Target state: The enrolment status of the user after the change.

   - Trigger: Condition of how the change occurs; E.g. ‘Front end’ equals learner self-enrolment and ‘Backend’ equals an admin triggered enrolment.
   - Identification: Relates to Identifier set in automatic enrolment workflow.
   - Publishing mode for enrolment e-mail: Relates to meta tag 10730 which can optionally be added to Course Types and Course Templates. Default value is ‘Not defined’.
3) Filter:
   - Add attribute: A small list of functional settings including Learning Mode as well as some key functional meta tags such as Provider, Location, Cancellation type and Planning status.
   - Add meta tag: A larger list of functional and descriptive meta tags that can be used to identify specific trainings.
4) Contents: Where the Enrolment Message text template is selected.

5 Notifications

Notifications are emails that are triggered by changes other than enrolment status changes and time-based triggers such as reminders. The ‘Notification’ function contains approximately 80 standard configurable emails that are categorised into folder structures.

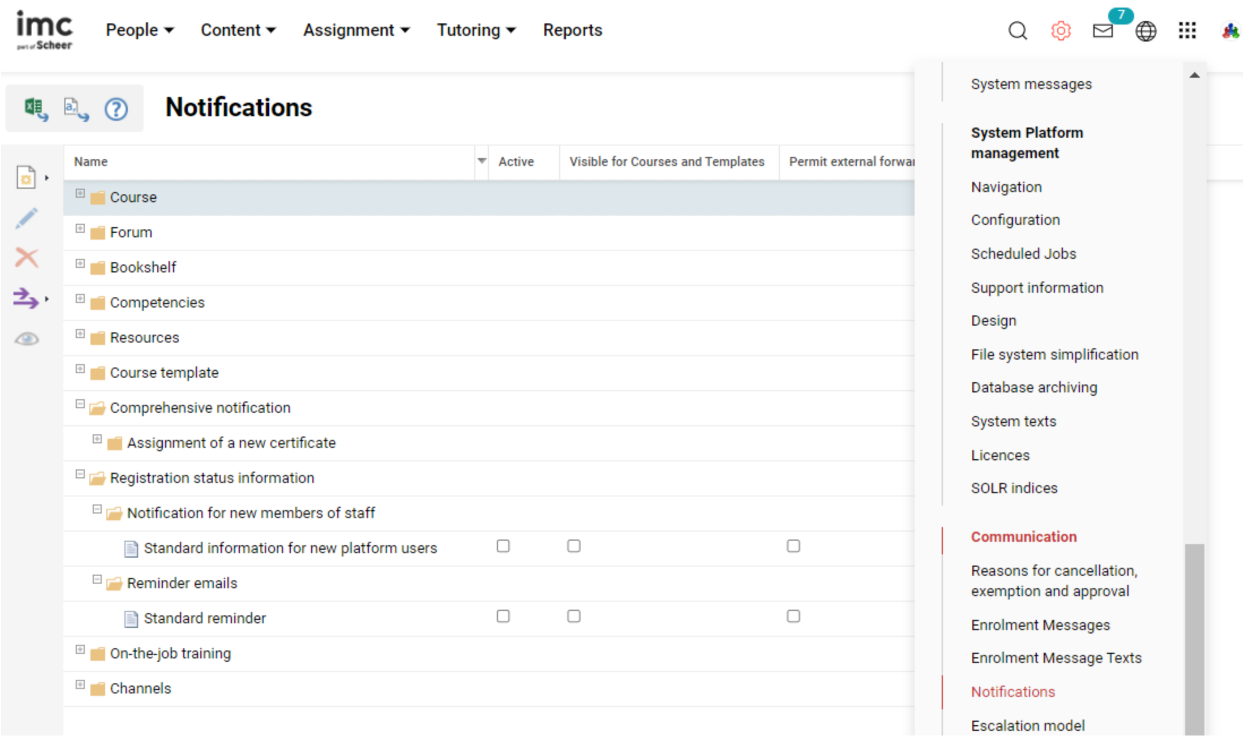


Figure 15: Notification structure for event driven emails.

When the folder structures are expanded the notifications within can be seen along with three checkboxes as described below:

- **Active**: When ticked the Notification will be sent.
- **Visible for Courses and Templates**: When ticked enables the Notification to be visible and then activated for desired Course Templates and Courses.
- **Permit external forwarding**: When ticked forwards the notification to the recipients external mailbox; E.g. Outlook.

The folder structures and notifications within are described below:

- **Course**: Detailed list of Course related notifications based on many trigger conditions.
  - (51) 'A new default feedback form is available' in a course that can be completed. The term 'Default' refers to a setting within the Feedback Form.
  - (53) 'A new event feedback form is available' for an Event in a course. Note: The ability to add a feedback form to event was deprecated in ILS14.
  - (52) 'A new transfer feedback form is available' in a course that can be completed. The term 'Transfer' refers to a setting within the Feedback Form.
  - (11) 'Standard notification by changes to the start or end date of a course module' notified active course participants when a media component has a date change.
  - (86) 'E-signature password misuse' relates to a course security function set with meta tag 10196 that when active requires the participant to login at the end of the course with their local username and password. The notification can be configured to distribute based on exceeding incorrect attempts or time to correctly enter.
  - (50) 'Standard notification to the exceeding deadlines of course modules' relates to scheduling of course components to be completed by a set date or x day after enrolment. This can be triggered based on x days before or after due date.
  - (144) 'Feedback form reminder for the supervisor' relates to Effectiveness Check function where the supervisor is required to provide pre or post training feedback for their staff member; E.g. feedback on goals or if improvements are visible.
  - (54) 'Defined period prior to final feedback submission' sends a reminder to course participants to complete a feedback form before a scheduling deadline.
  - (56) 'Reminder: event feedback form' sends a reminder to course participants to complete an Event feedback form before or after a scheduling deadline. Note: The ability to add a feedback form to event was deprecated in ILS14.
  - (55) 'Reminder: transfer feedback form' sends a reminder to course participants to complete a feedback form before or after a scheduling deadline. The term 'Transfer' refers to a setting within the Feedback Form.
  - (101) 'Standard notification after course enrolment' is a flexible notification typically used to remind users of their enrolment where they are yet to start (Status still 'Enrolled') the course x days after enrolment.
  - (1) 'Standard notification to former administrator' triggers for non-cancelled or concluded courses to notify the former administrator when the Course Administrator has been changed; relates to meta tag 10007.
  - (2) 'Standard notification to new administrator' triggers for non-cancelled or concluded courses to notify the new administrator when the Course Administrator has been changed; relates to meta tag 10007.
  - (4) 'Standard notification to new tutors' is used to alert tutors when they have been assigned to a Course via the 'Tutors' tab.
  - (3) 'Standard notification to previous tutors' is used to tutors when they have been removed from a Course via the 'Tutors' tab.
  - (140) 'Notification to administrator if participants do not fulfil prerequisites' alerts the Course Administrator if meta tag 11801 is ticked and a participant has failed to meet the Course Prerequisite x days before or after the date set in meta tag 12073. A related 'Prerequisite check' meta tag 11836 can also be activated to visually aid identifying participants that do not meet prerequisites.
  - (139) 'Notification to participants regarding the upcoming cancellation due to non-fulfilment of prerequisites' alerts the Participant if meta tag 11801 is ticked and the participant has failed to meet the Course Prerequisite x days before or after the date set in meta tag 12073.
  - (141) 'Notification to tutors if participants do not fulfil prerequisites' alerts the Tutors if meta tag 11801 is ticked and a participant has failed to meet the Course

Prerequisite x days before or after the date set in meta tag 12073. A related 'Prerequisite check' meta tag 11836 can also be activated to visually aid identifying participants that do not meet prerequisites.

- (13) 'Standard notification prior to end date of a course module' is used to notify Participants of a non-completed course component x days before or after the component end date which could be via scheduling.
- (12) 'Standard notification prior to start date of a course module' is used to notify Participants of a non-completed course component x days before or after the component start date which could be via scheduling release.
- (7) 'Standard notification to participants' is used to notify select Participants x days before or after the course end date which could be a fixed date (date dependent course) or a flexible date (duration of use course).
- (8) 'Standard notification to tutors' is used to notify Tutors x days before or after the course end date.
- (102) 'Notification to administrators if minimum number of participants has not yet been reached' is triggered when the number of enrolled participants is lower than the value set in meta tag 10121 x days before the course start date. This is valuable to have administrator either chase more participants or cancel the course.
- (5) 'Standard notification to participants' is used to notify select Participants x days before (or after) the course start date and is typically used as a reminder including specific details such as preparation or arrival instructions.
- (1107) 'Standard notification to participants with QR code' is used to remind Participants x days before the course start date and provide a QR code that can be scanned on arrival to the course session to track attendance.
- (6) 'Standard notification to tutors' is used to notify Tutors x days before (or after) the course start date and is typically used as a reminder including specific details such as preparation instructions.
- (143) 'Feedback notification to supervisor after submission of learner' is sent to a participant's supervisor after the submission of a transfer feedback form and the supervisor's feedback is active. Relates to the Effectiveness Check function.
- (1106) 'Notification about attachment of a participant in regard to a task' is sent to Tutors with 'On-the-job training' checkbox ticked when a participant uploads an attachment to an On-the-job Training Task.
- (1104) 'Notification about feedback from a participant in regard to a task' is sent to Tutors with 'On-the-job training' checkbox ticked when a participant enters feedback to an On-the-job Training Task.
- (1105) 'Notification about feedback of a tutor in regard to a task' is sent to a Participant when a Tutor with 'On-the-job Training' checkbox ticked provides feedback to an On-the-job Training Task.
- (98) 'Notification about attachment of a tutor in regard to a task' is sent to a Participant when a Tutor with 'On-the-job Training' checkbox ticked uploads an attachment to an On-the-job Training Task.
- (94) 'Status change for a task' is a flexible notification that it can be duplicated to trigger by any desired task status change and be received by the Participant, Tutors or a Participant's Supervisor.
- (93) 'Status change for a training' is a flexible notification that it can be duplicated to trigger by any desired On-the-job Training (template) status change and be received by the Participant, Tutors or a Participant's Supervisor.
- (10) 'Standard notification by publication of course news' is used to alert course Participants and/or their Supervisor when news articles are listed against the course. To view News articles on a Course requires the 'News' panel to be active in the detailed Course Room.

  - (9) 'Standard notification on feedback forms that have not been submitted after the course has ended' serves as a reminder to Participants and/or their Supervisor x days after Course conclusion to complete an open Feedback Form.
  - (1001) 'Changes to a non-cancelled course' is one of the most commonly used notifications as it can notify all users (Participant, Supervisor, Tutors, Admin) involved in a Course of just about any change to settings and meta tag values.
- **Forum**: Relates to activities occurring in media objects of type 'Forum'.
  - (22) 'Standard notification by deletion of a forum' alters the listed Moderator of a forum when it is deleted including details of who deleted the Forum. These are Client specific notifications where a value must be set in the 'Recipient(s)' tab
  - (21) 'Standard notification to new moderators' alerts Moderators when they have been assigned to a published Forum. These are Client specific notifications where a value must be set in the 'Recipient(s)' tab.
  - (20) 'Standard notification to previous moderators' alerts Moderators when they have been removed as Moderator of a published Forum. These are Client specific notifications where a value must be set in the 'Recipient(s)' tab.
  - (23) 'Standard notification of a new entry' is used to alert Forum Moderators and/or Course Participants (where the Forum is assigned) of any new entry.
  - (540) 'Standard notification for a response to an individual message' is an important notification if Forums are used as it alerts users to when one of their topics or threads are responded to. The recipients can be the Forum Moderator, Topic Creator, Original Poster or Course Participants.
  - (24) 'Standard notification for a response to message' is an important if Forums are used as it alerts users to when one of their messages are responded to. The recipients can be the Forum Moderator, Topic Creator or Course Participants.
- **Bookshelf**: Notification related to the Bookshelf function.
  - (31) 'Standard notification for the new reading recommendation' is triggered when an Administrator assigns a media item to a user's Bookshelf which could be individually or bulk by Group assignment. The Bookshelf function must be activated for this to be possible and a Bookshelf panel must be added to an internal dashboard for the user to access the content.
- **Competencies**: Notifications related to Job Profiles, Skills and Certifications.
  - (136) 'Certification due in x days and not completed' serves as a reminder to Participants and/or their Supervisor that the Participant is yet to achieve time or point requirements of an assigned Certification x days before or after the Certification due date. Certification is a licenced add-on module used for tracking accredited certifications such as IDD, CPE or CPD.
  - (77) 'Confirmation/denial by superior' advises users of the outcomes when their Supervisor assesses any Self-assessed Skill ratings; E.g. Confirmed or Denied.
  - (76) 'Confirmation request by staff member' alters Supervisors when their staff have self-assessed Skills that subsequently require Supervisor approval.
  - (33) 'Job profile changed by supervisor' is used to alert users when Job Profile assignments have changed which could be adding, removing or status update by either their Supervisor, an Administrator or system rules.
  - (32) 'Job profiles added by staff' alerts Supervisors whenever their staff have self-assigned any Job Profiles. The Supervisor is then able to Confirm or Reject in the My Staff function.
  - (134) 'Notification of non-evaluated self-assessment' allows configuring a series of reminder emails to request a user to self-assess all of their assigned Skills that allow self-assessment. This could be used in the context of competency frameworks where staff members would self-assess themselves in several categories and then their Supervisor would also assess.

  - (135) 'Notification of non-confirmed skills' allows configuring a series of reminder emails to Supervisors that they need to assess some Skill self-assessments of their Staff. The Supervisor would then able to Confirm or Reject the Skill self-assessments of their staff in the My Staff function.
  - (75) 'Skill expires in x days' is an important notification to create reminders for staff and their Supervisors when there are Skills with pending expiries or required Skills that have lapsed. These Skill expiry dates can be extended via training completion or via manual assessment.
- **Resources**: Notifications related to Resource Management.
  - (73) 'Standard notification to indicate that a participant-specific reservation has been accepted' when booking of a Resource of type Person which is normally a Tutor where the resource is linked to a user.
  - (46) 'Standard notification to the cancellation a resource booking' sent to the Course Administrator on Course saving when an assigned Resource has been removed.
  - (45) 'Standard notification to the cancellation of the booking specific to participants' alters the Course Administrator if the booked 'Person' Resource is no longer user-specific and has been cancelled.
  - (42) 'Standard notification to the cancelation of the divisibility' sent to a Course Administrator with a booked Resource that was divisible where it could be booked multiple times simultaneously, but the divisibility has now been cancelled.
  - (43) 'Standard notification to the cancelation of the shareability' sent to a Course Administrator with a booked Resource that was divisible where it could be booked/shared multiple times simultaneously, but the shareability has now been cancelled.
  - (41) 'Standard notification to the change of the availability' sent to a Course Administrator when a Resource's availability period has changed; E.g. the booking days or hour range.
  - (44) 'Standard notification to the change of the maximum number of bookings at one time' notifies the Course Administrator when a booked Resource has been updated with a change in the 'Maximum number of bookings' field and saved.
  - (40) 'Standard notification to the deactivation a resource' notifies a Course Administrator of a Course where the booked Resource has become 'Deactivated'. The email will trigger immediately when the Resource is saved.
  - (74) 'Standard notification to indicate that a participant-specific reservation has been refused' is sent to the user that requested the booking and the Resource has declined the booking.
  - (47) 'Standard notification to the off time a resource' is an alert send to Course Administrators where there is a booked Resource for their Course and the Resources non-availability periods have changed.
- **Course template**: Notifications for pre-booked users on course availability.
  - (49) 'Standard notification to the new available courses' allows creating a series of time-based notification alerts every x days/weeks/months to notify users when there are new Courses available for the Course Template they are Pre-booked on. Pre-booking or Personal Syllabus statuses are often related to compliance workflows where users are required to complete a Date Dependent compliance course, or where the user is interested in attending a Course at a different date or location.
  - (80) 'Notification for newly available course instances' immediately notifies users with a Pre-booked and/or Personal Syllabus status on a Course Template as soon as a new Course is released.
- **Comprehensive notification**: Currently for Certificate availability.
  - (57) 'Assignment of a new certificate' notifies Learners when they have received a new Certificate; E.g. through completion of a Course, Learning Path or Test.
- **Registration status information**: Messages relate to compliance training workflows.

- (81) 'Standard information for new platform users' is predominantly used as a once off message to provide new users a day or so after account creation (Enrolment date) details of the initial compliance-based training courses they need to complete and by when. The trigger conditions are quite flexible as are the content and user filtering options to achieve further specific workflows.
- (84) 'Standard reminder' is the notification required to send the Escalation Model messages mentioned earlier in the document. This notification allows configuring Conditions and Filters like other notifications, but it is not possible to update notification text as this is determined in the selected 'Escalation Model'. It is common to duplicate this notification to consider differing Escalation Models for Participants and their Supervisor as well as the different enrolment identifiers.

- **On-the-job training**: Relates to directly assigned On-the-job Trainings (not via Course).
  - (95) 'Change to the start or end date for a training' is used to notify the Staff member, Mentor, Supervisor or HR group member when the start or end times of a directly assigned On-the-job Training have been changed.
  - (99) 'Notification about a new training' to alert the Staff member immediately once a new On-the-job Training has been assigned. The notification can also be sent to the Staff member's Supervisor, the On-the-Job Training Mentor and/or HR group members.
  - (1103) 'Notification about attachments from a staff member in regard to a task' is sent to Mentors when a Staff member uploads an attachment to an On-the-job Training Task.
  - (1101) 'Notification about feedback from a staff member in regard to a task' is sent to the Mentor immediately after the Staff Member enters feedback within an On-the-job Training Task.
  - (1102) 'Notification about feedback from a mentor in regard to a task' is sent to a Staff member when a Mentor provides feedback to an On-the-job Training Task.
  - (97) 'Notification about attachment by a mentor in regard to a task' is sent to a Staff Member when the Mentor uploads an attachment within an On-the-job Training Task.
  - (132) 'Notification before the end of a training module' is used to alert the Staff Member x days before the end date of a non-completed On-the-job Training to complete the tasks. The notification can be duplicated to additionally notify the Mentor, Supervisor or HR team.
  - (131) 'Notification before the start of a training module' is used to remind the Staff Member x days before the start date of a pending On-the-job Training. The notification can be duplicated to also notify the Mentor, Supervisor or HR team.
  - (96) 'Notification in the event of a mentor change' can used to notify all users involved with the directly assigned On-the-job Training when the Mentor has been replaced; this includes the Staff member, Mentor (new and old), Supervisor and HR team.
  - (92) 'Status change for a task' is a flexible notification that it can be duplicated to trigger by any desired task status change and be received by the Staff Member, Mentor, Supervisor or HR team.
  - (91) 'Status change for a training' is a flexible notification that it can be duplicated to trigger by any desired On-the-job Training (template) status change and be received by the Staff Member, Mentor or Staff Member's Supervisor.
- **Channels**: Messages related to Channels function.
  - (146) 'New channel content available' is sent to users who have subscribed to a Channel and new Media items have been assigned to the Channel.

5.1 Creating or Editing Notifications

The ability to create new notifications is limited due to the complexity of trigger conditions and mainly duplication is used to replicate time-based reminder notifications. When creating new Notifications it's only possible to do so for Courses with conditions of a meta tag changing from one value to another.

- Description: Name can be altered for admin purposes as name is not seen by recipient.
- Conditions: Allows altering trigger settings related to the notification; E.g. status or days.
- Filter: Used to further limit circumstances for which the notification is sent based on meta tag or personal attribute values.
- Content: Is where the email subject, body text and sender details are composed. Variable placeholders are used to make the notifications dynamic and the sender details can dynamically update when a filtered Provider is linked to a Client.
- Recipient(s): Checkboxes can be ticked to select the 'Dispatching mode' (automatic or manual by course administrator) and who is to receive the notifications. The available recipients can change for different types of notifications.

When creating or editing Notifications the use of variable placeholders ensures that the emails are personalised with dynamically updated training object and user information. Unlike Enrolment Message texts the standard Notifications are produced in plain text, but they can be created or updated in HTML; However, if updating Notifications to HTML the sanitizer must be disabled to retain <html> headers upon saving. Within the Notification 'Content' tab are 'Subject' and 'Content' fields for each activated system language. On the right-hand side are folders that contain the variable placeholders that are used to dynamically update the message content with specific details of the training or participants.

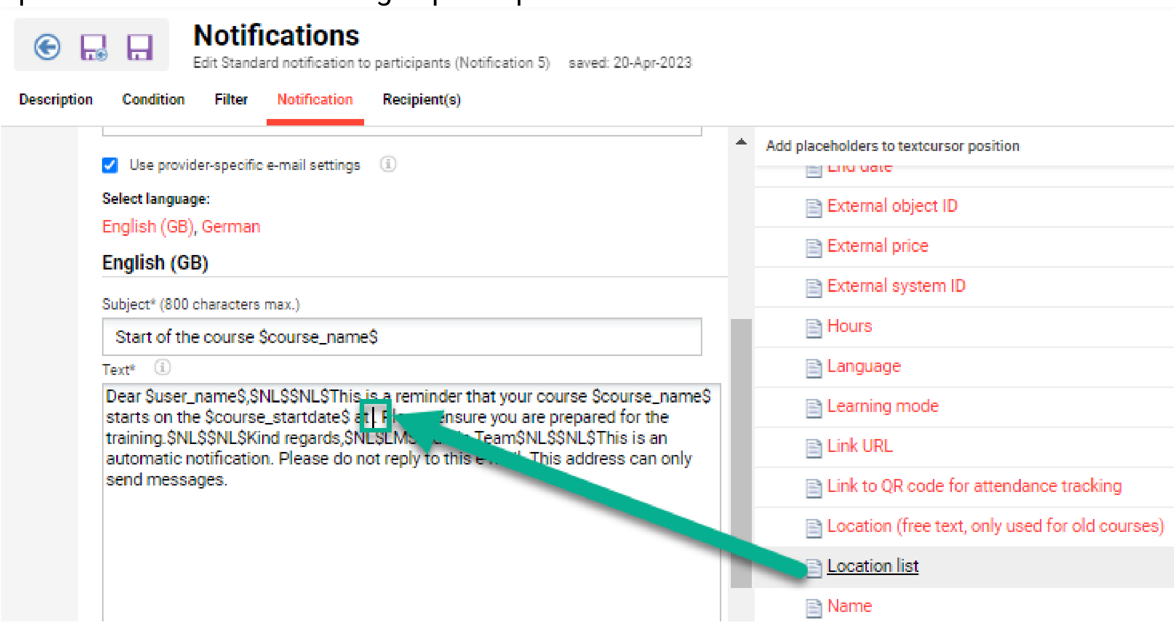


Figure 16: Inserting a variable placeholder into a notification text.

5.2 Course specific Notifications

With 'Course' Notifications these can actually be individually adapted per course in the 'Course Templates' and 'Courses' menus using the 'Edit notifications' icon. In these menus all course Notifications that are ticked as 'Active' or 'Visible for Courses and Templates' will be available for further editing or adjusting the 'Active' status. Editing a course specific Notification provides the exact same tab options as editing via the ‘Notifications’ function. When editing the course Notification via the Course Template function the changes made to the Notifications will automatically be inherited by Courses later created from the Course Template; whereas any changes made directly via the Courses function will only be visible for the single Course.

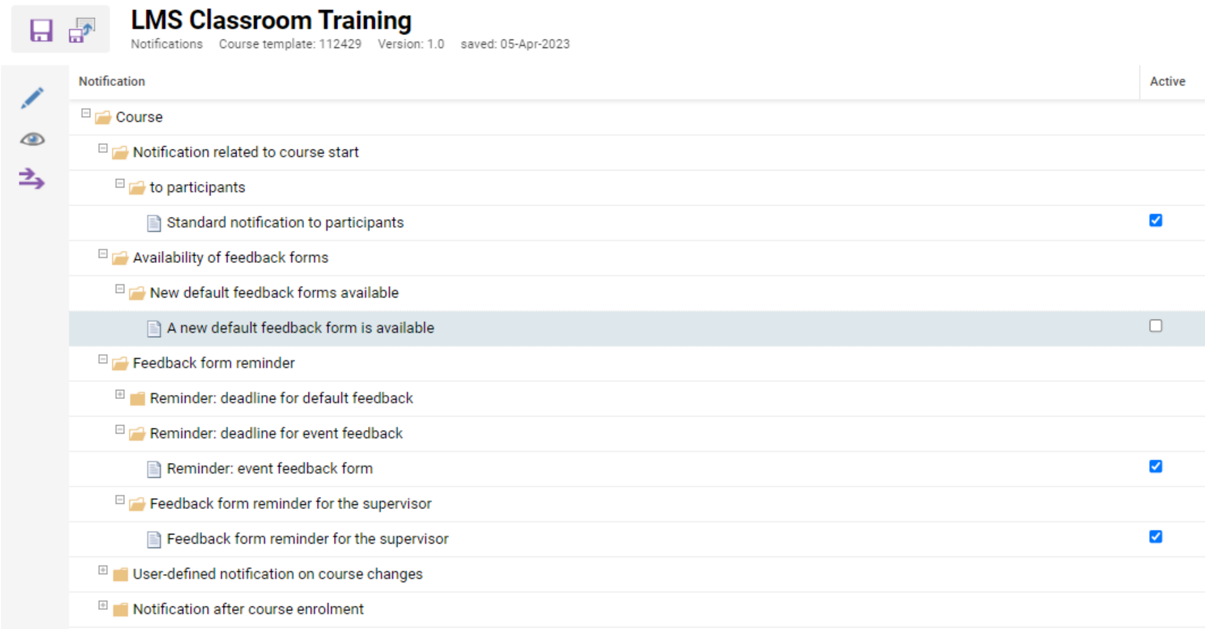


Figure 17: Altering default course notifications per course.

5.3 Notification Scheduled ‘cron’ Job

Where Notification distribution is triggered by a time-based condition there is a scheduled ‘cron’ job. Crons are jobs that can be scheduled to run automatically at desired times or manually triggered to perform background software tasks. The use of crons is very common in web-based applications and the imc Learning Suite is no exception with a large amount of jobs to process on a regular basis including Notification distribution which is one of the larger jobs.

The cron is configurable in the ‘Scheduled jobs’ function and is called ‘Notification’. In terms of the cron timings the imc Learning Suite uses a 'Quartz' cron format that allows scheduling by seconds, minutes, hours, day of month, month, days of week and year. Typically, imc consultants would recommend that the Notification cron be configured to process somewhere between 7am to 9am which is after other important jobs have run and before the users work day.

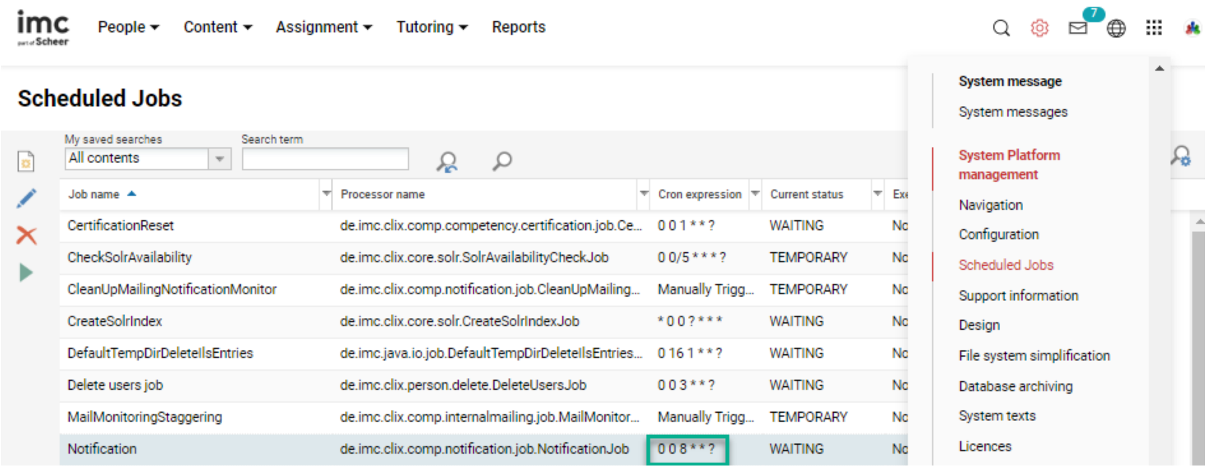


Figure 18: Scheduled cron job required to send notifications with time-based triggers.

Note: If the 'Scheduled jobs' menu is not available it can be configured in the 'Navigation' and would normally be created in the 'Settings > System platform management' folder with the identifier 'm_jobs'. Further information on forming a quartz cron can be found at https://www.freeformatter.com/cron-expression-generator-quartz.html.

6 Escalation Model messages (Compliance)

Automatic enrolments for Courses and Learning Paths can trigger a series of reminder emails participants and their supervisor when compliance training has not been completed x days before or after a training completion due date. These triggers and the message text are configured in a function called ‘Escalation model’ and then once configured can be added as a condition in the ‘Standard reminder’ Notification in the ‘Registration status information / Reminder emails’ folder. The Escalation Model basically is used to define interval of the reminder notifications to the participant and subsequent escalation messages to the participants’ supervisors when training is not completed.

When creating an Escalation Model it is possible to manually configure the desired intervals or select to have a daily reminder. The options are described below:

- Escalation messages: This option requires individually creating each escalation message including the trigger (x days before/after), the subject and text. Due to the repetition of creating multiple messages for different days, it can be more efficient copying the ‘Text’ field message content to paste into subsequent reminders.

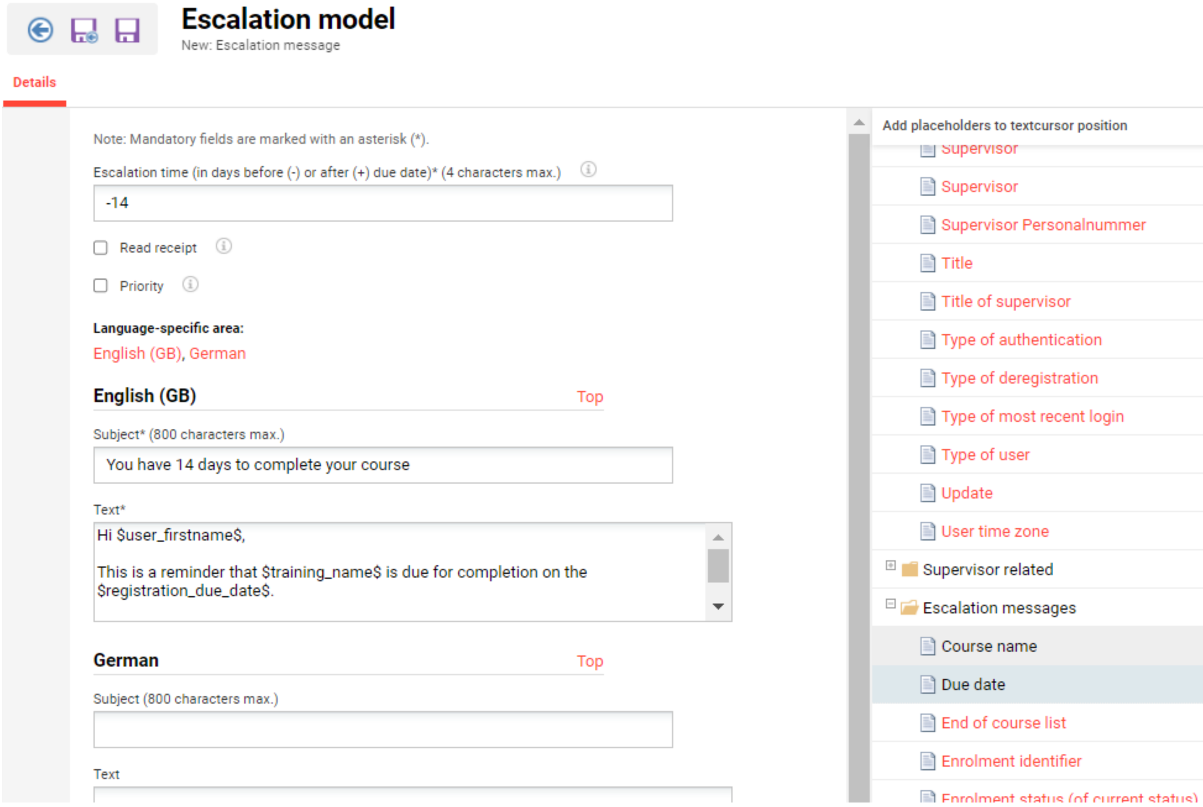


Figure 19: Configuring of a 'Escalation message' where individual trigger days are defined.

- Daily reminder: This option only requires entering a period of days before and days after the participant due date for a single email text block to send. With this approach it is simpler, but does not allow gradual stepping up of the escalation; E.g. slowly increasing frequency or setting read receipts.

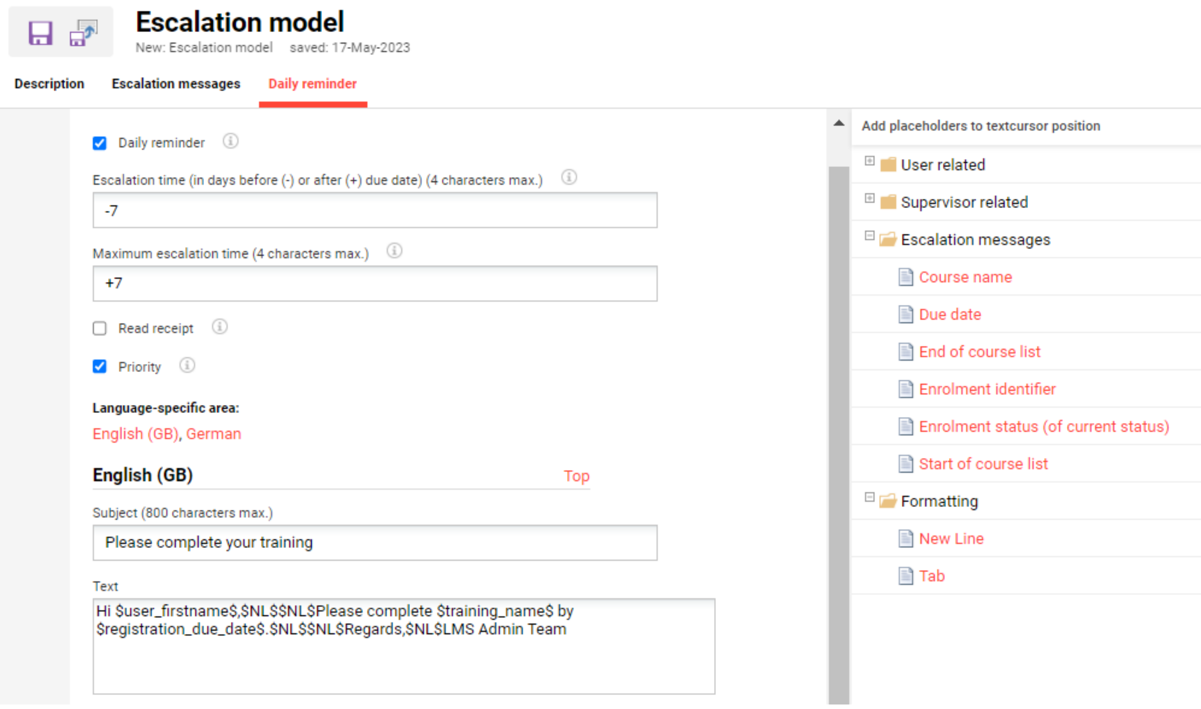


Figure 20: Configuring a 'Daily reminder' escalation message.

Once the Escalation Models are saved they are selectable in the 'Condition' tab of the Notification 'Standard reminder' (84) that is found in the 'Registration status information > Reminder emails' folder. The 'Enrolment status' conditions would normally include 'Enrolled', 'In progress' and 'Personal syllabus'. The 'Identification' is set in the automatic enrolment workflow to set the completion expectation.

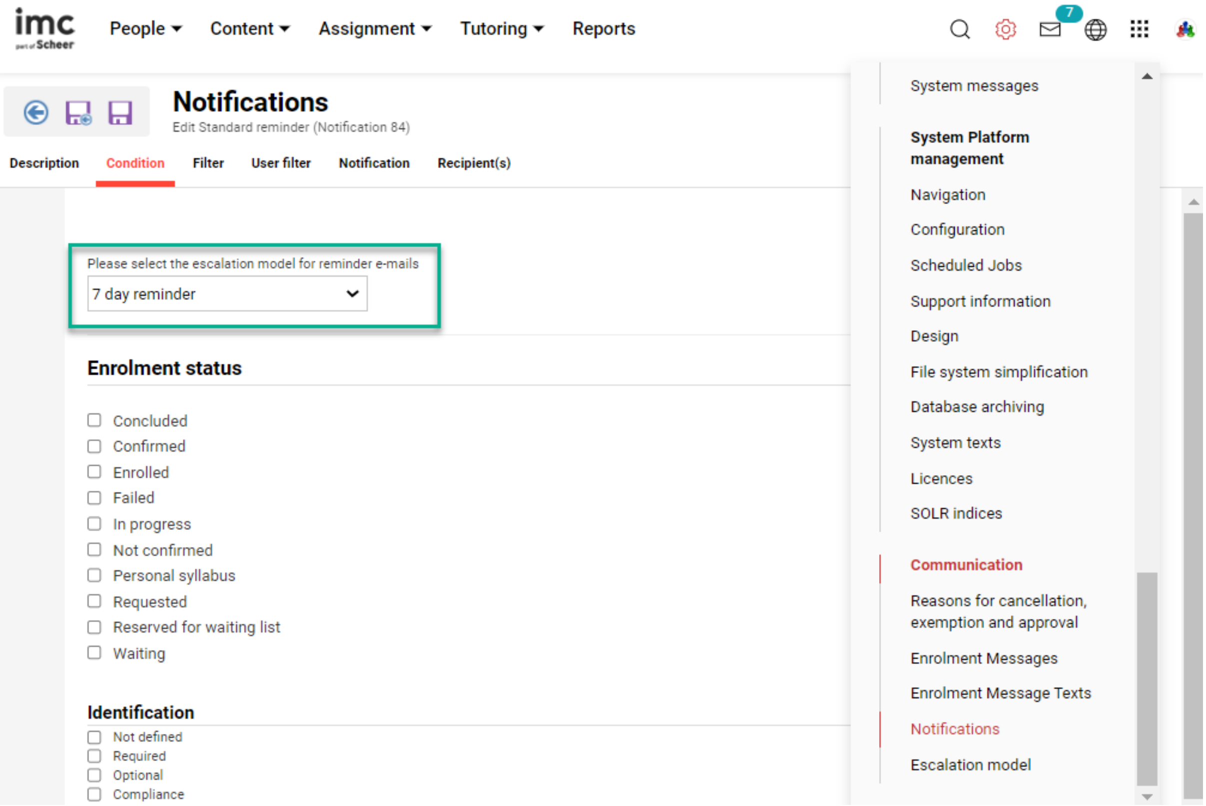


Figure 21: Notification for 'Standard reminder' where Escalation model is selected.

7 Learning Logic Messages

In Courses and Learning Paths rules known as 'Learning Logic' can be defined to determine how learners progress through the syllabus components. With Learning Logic rules it is possible to send emails with a custom configured message to the Participant, Supervisor, Tutor or Course Administrator. For example, emails can be sent to a Participant if they pass a test to instruct on next steps or to their Supervisor if they fail the test. With these notifications the variables available are limited mainly to describe the component and participant's status.

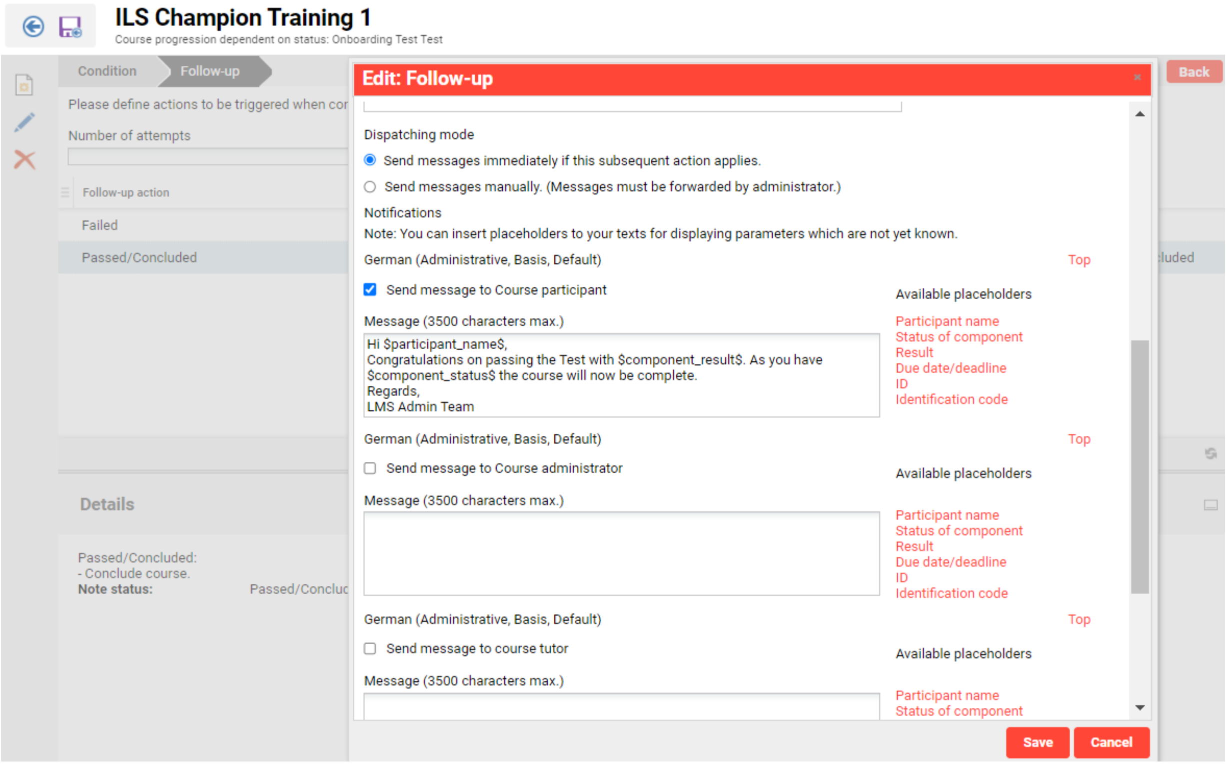


Figure 22: Creating a custom email within a Learning Logic rule in a couse syllabus.

Note: Learning Logic is configured in the ‘Components’ tab of Courses and the ‘Syllabus’ tab of Learning Paths by selecting a component, clicking the ‘Edit’ icon, selecting ‘Learning logic’ and ‘Define rule’.

8 Internal Mailbox

The internal mailbox is accessed via the ‘Messages’ icon and displays all emails sent from the LMS to the user including training enrolment messages and various event driven notifications such as reminders or report subscriptions. Within the ‘Messages’ function the user may search for emails, delete emails and reply to personalised emails sent by training administrators or tutors. These emails are generally also sent to external mailboxes as well if ‘Email forward’ attribute is ticked and notifications ‘Permit external forwarding’ is ticked. If there are unread emails the number will be conveniently displayed. Currently there are no further configuring settings directly related to the ‘Messages’ mailbox to control options.

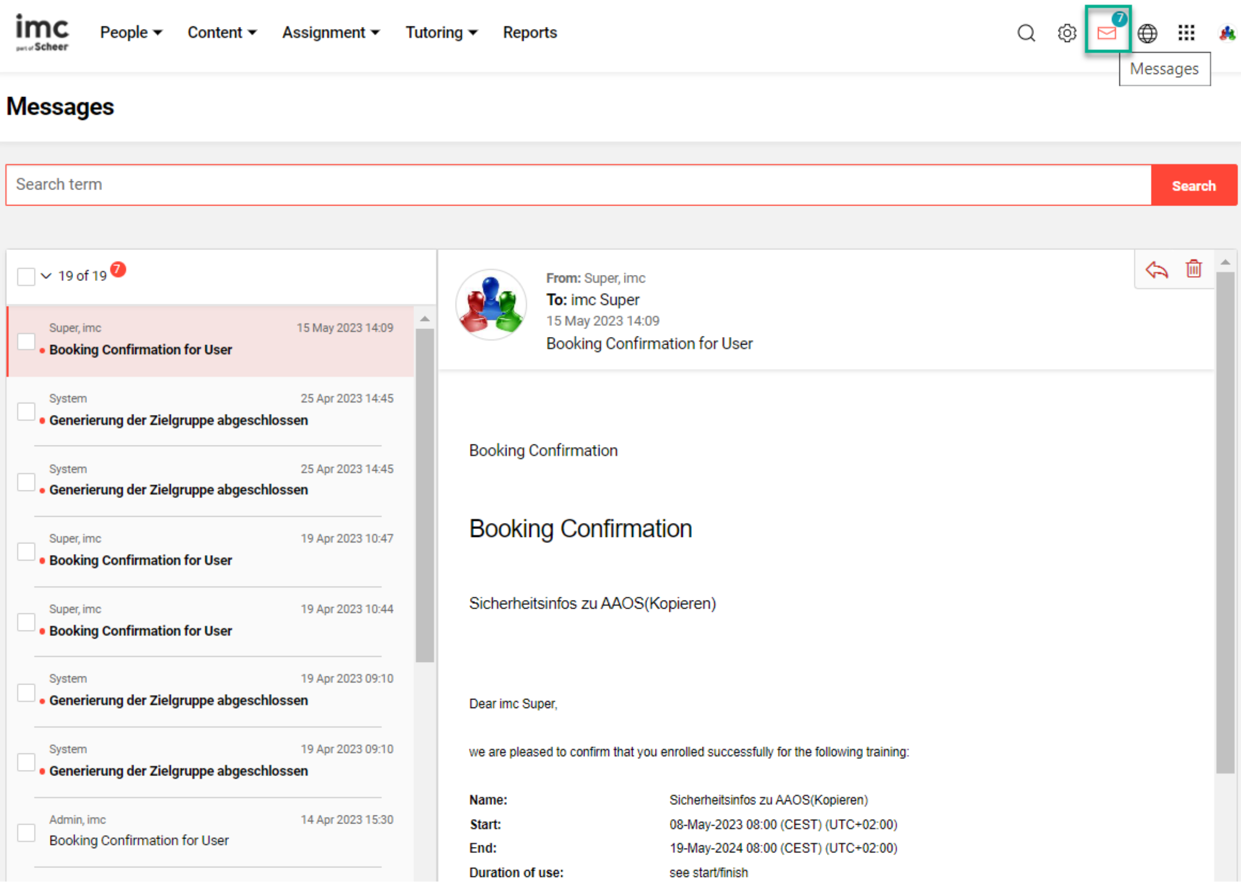


Figure 23: View of a user's 'Message' internal inbox show received messages.

9 Email Monitoring

Enrolment Messages and most Notifications sent by the LMS are tracked so they can viewed or resent by system administrators if needed. Emails not tracked are ones related to account credentials or directly sent messages.

9.1 System Messages viewer

The 'System messages' function is a central log where System Administrators are able to view all recorded messages. Here messages can be viewed in either a 'Recipient-centered view' or 'Chronological view' tab.

- Recipient-centered: User-based view where searching is based on user first name, last name or email. Here it is possible to bulk select users and clicking the 'Show system messages' icon will display a list of all Enrolment Messages and Notifications sent to the selected users in a new tab/s. Details will include the sent date, message subject and status. If needed messages can be directly resent or edited before resending.
- Chronological: Time-based view where searching is based on a date range, message type, status or specific Notifications. Here it is possible to 'Show recipients' of messages sent at specific times with details including the sent date, message subject and status. If needed messages can be directly resent or edited before resending.

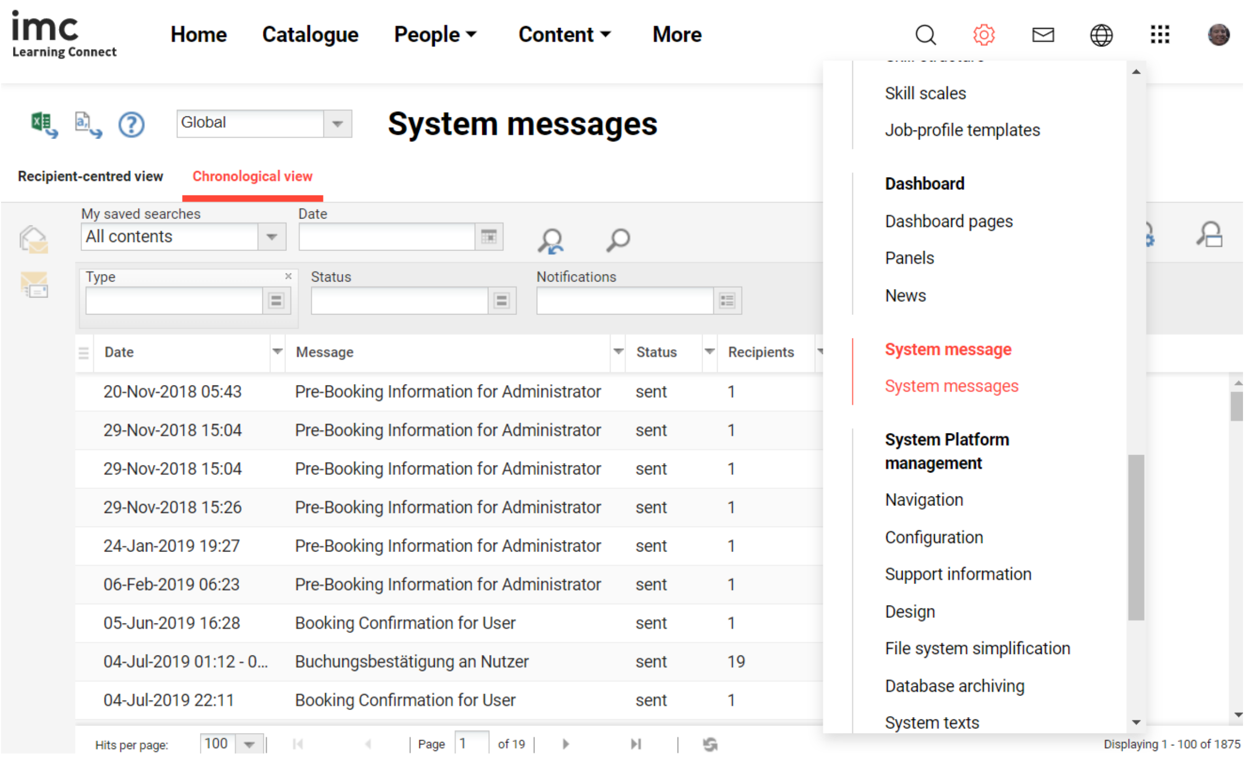


Figure 24: System message monitor to view all Enrolment messages and Notifications by user or time.

9.2 Course Message monitor

The 'Message monitor' for Courses is available via the 'Notifications' icon. Here all Enrolment Messages, Notifications and Learning Logic emails specific to the selected Course can be found. Like the central 'System messages' monitor there are options for both 'Recipient-centred view' and 'Chronological view'. This feature provides Course Administrators the ability to view all messages sent for their Courses to ensure emails are being correctly distributed. If there are errors they will be tracked in the 'Status' column and the Course Administrator will be able to attempt a 'Resend' or request a log file investigation to help identify the potential cause of the error.

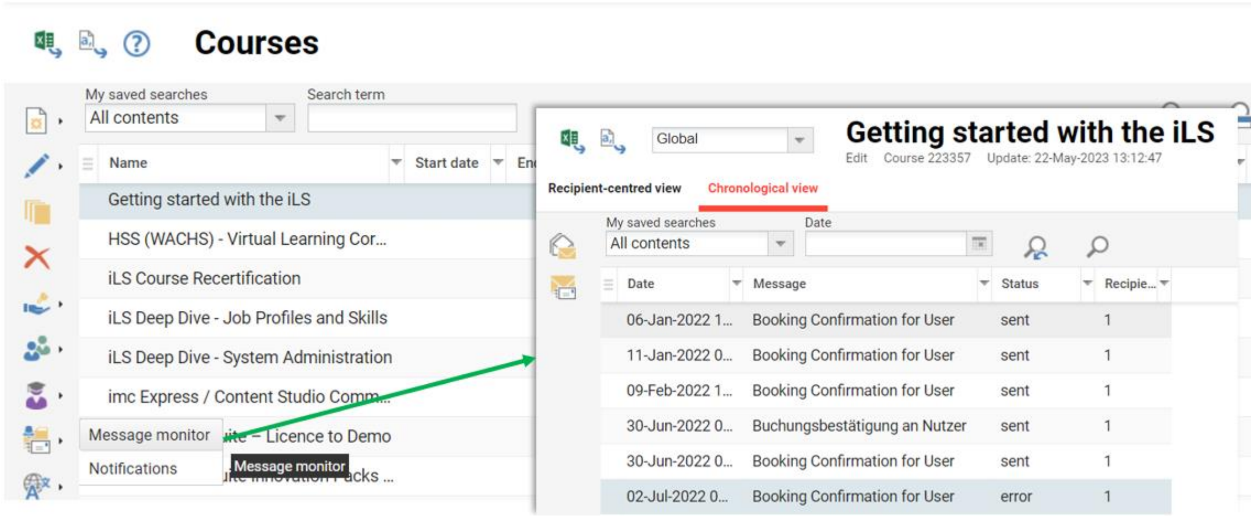


Figure 25: Course specific 'Message monitor' to view enrolment messages and notifications.

10 Feedback email

If desiring a 'Feedback' or 'Contact' email link for users to send messages to an internal support/admin team there are two ways to achieve this which are via a panel or navigation.

10.1 Feedback Panel

There is a standard panel called 'Feedback' (ID 176) that can be added to internal dashboard pages. When editing the panel it allows entering a Description that displays to users prior to clicking a 'Submit feedback' button and selecting some attributes that will prepopulate in the message to help advise who the sender is.

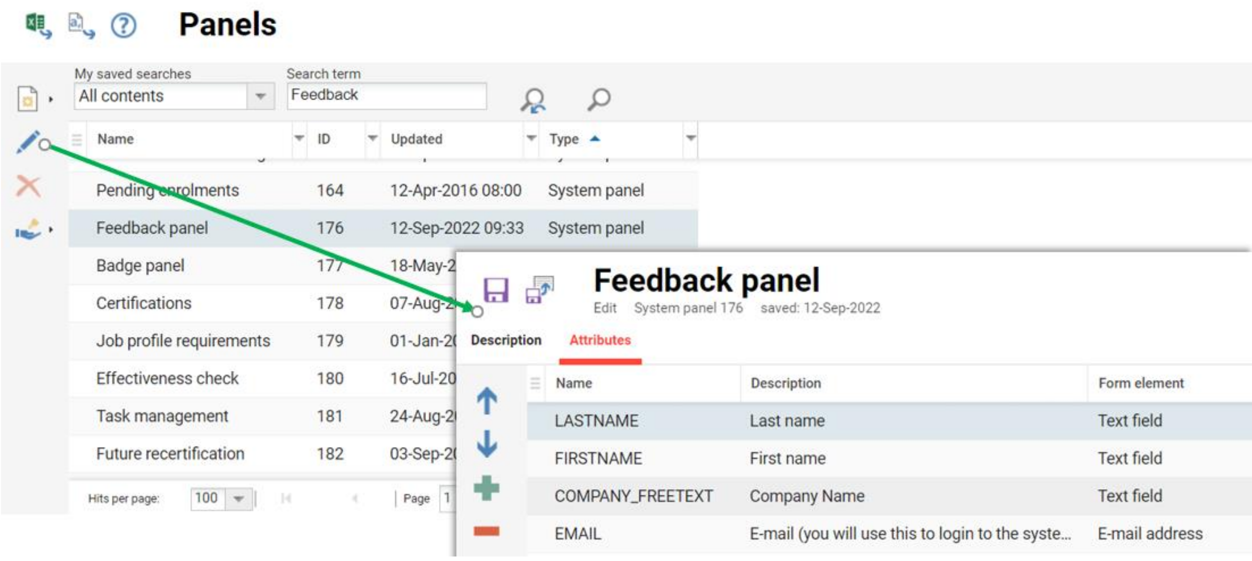


Figure 26: Configuring of a 'Feedback' panel with adding attributes.

Below is an example of how the feedback panel appears on an internal dashboard page.

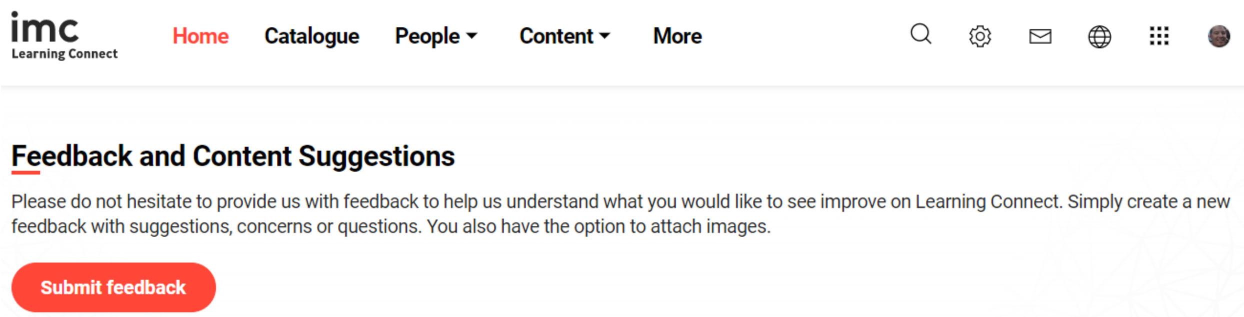


Figure 27: Display of a 'Feedback' panel on an internal dashboard page.

When the 'Submit feedback' is clicked a form is launched with a free text box 'Please enter your feedback' and the attribute values defined in the 'Attributes' tab of the panel are displayed pre-populated with details from the logged in user's profile.

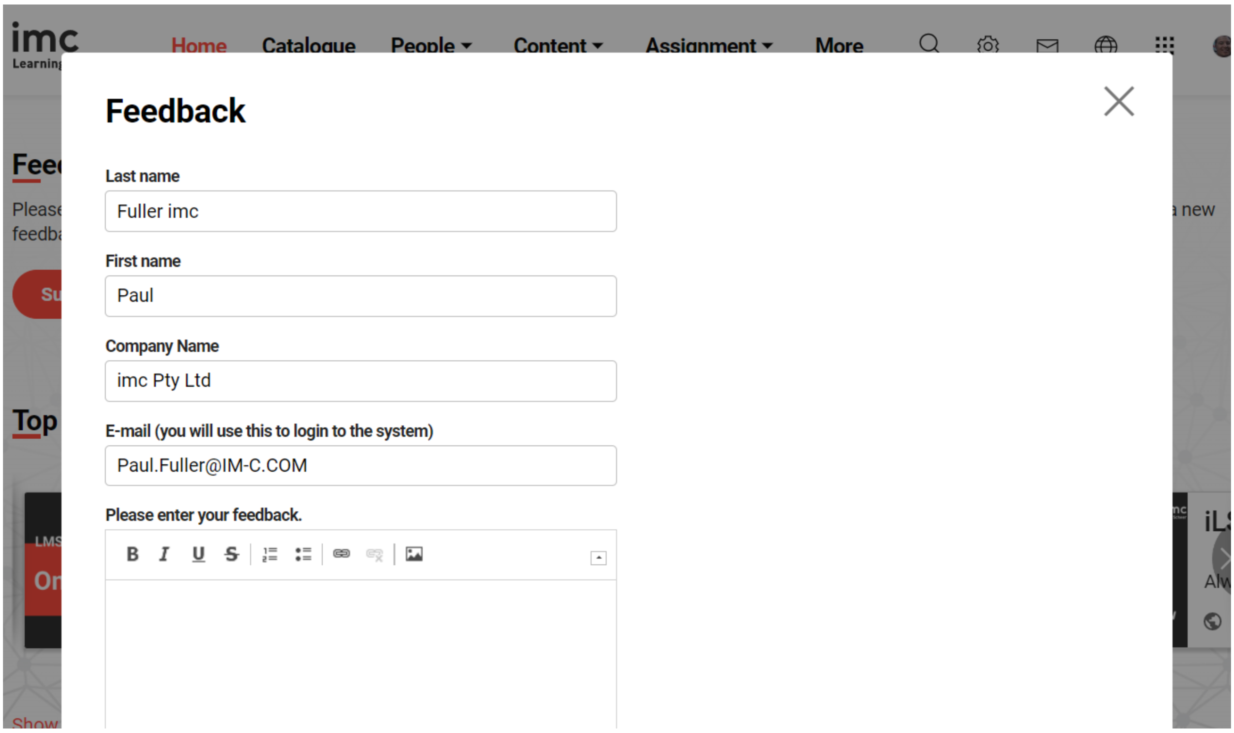


Figure 28: Example of a 'Feedback' panel message form.

When feedback is submitted it is sent to the email address configured in the master Client 'E-mail address' tab setting 'Email address for user feedback'.

10.2 Navigation 'Feedback' or 'Contact' links

A 'Feedback' or 'Contact' link can additionally be configured directly in the system navigation using a 'Special function' menu that when clicked launches a feedback message form.

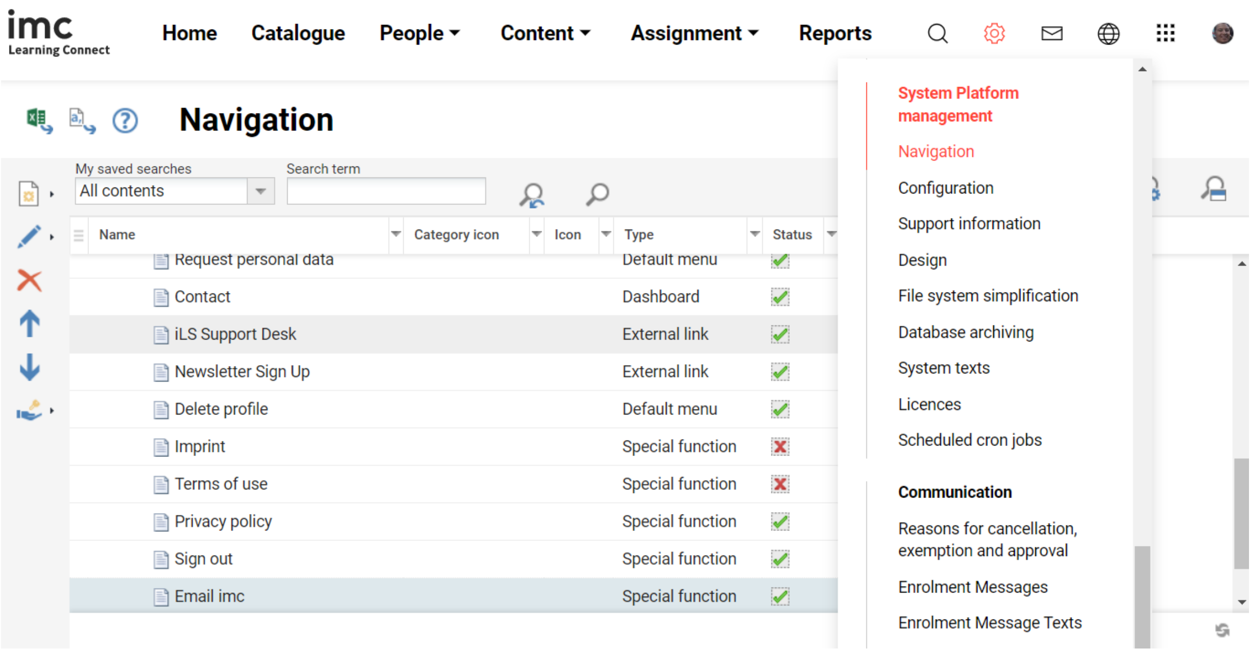


Figure 29:

This can be configured in the ‘Navigation’ function by creating a new ‘Menu’ with the Menu type ‘Special function’ and selecting the Special function ‘Feedback’. The ‘Name’ determines the name of the navigation point and the ‘E-Mail’ is who will receive any feedback messages. Access rights then determine which groups will have access to see the new menu.
This approach can compliment the panel approach where a different recipient is required.

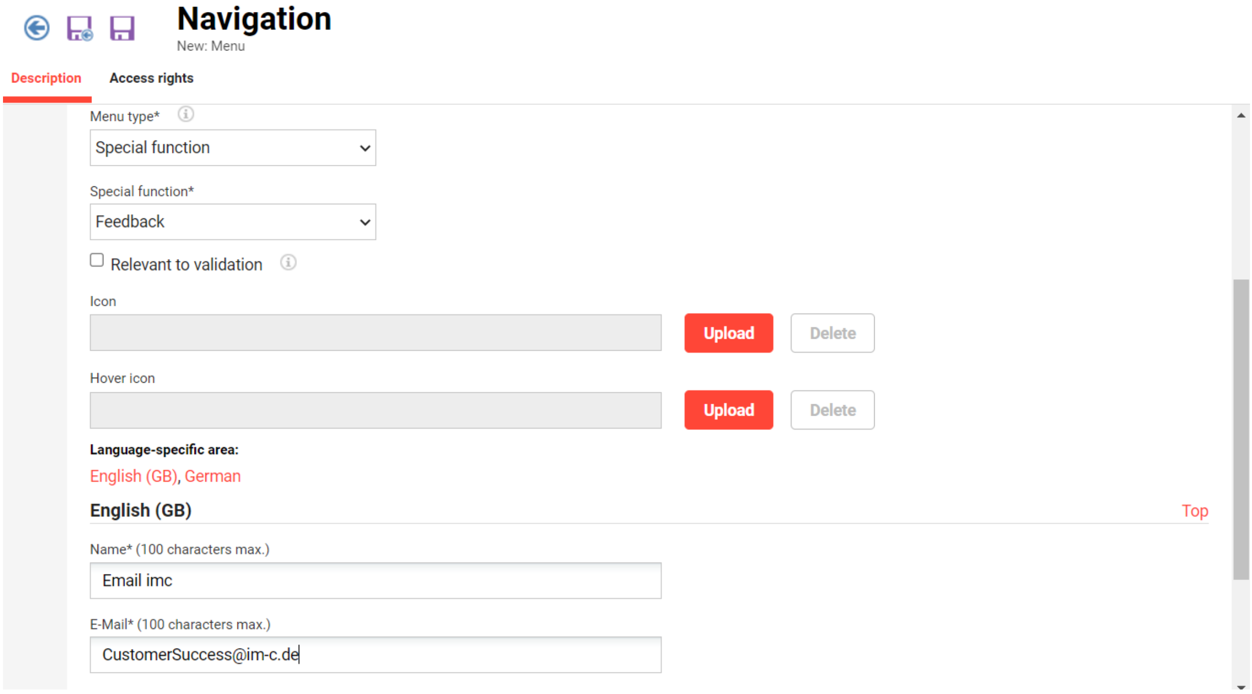


Figure 30: View of creating a new ‘Feedback’ special function menu in the navigation.

When a user clicks a feedback link a simple text form is presented where the message can be entered and then submitted via clicking the ‘Send feedback’ button.

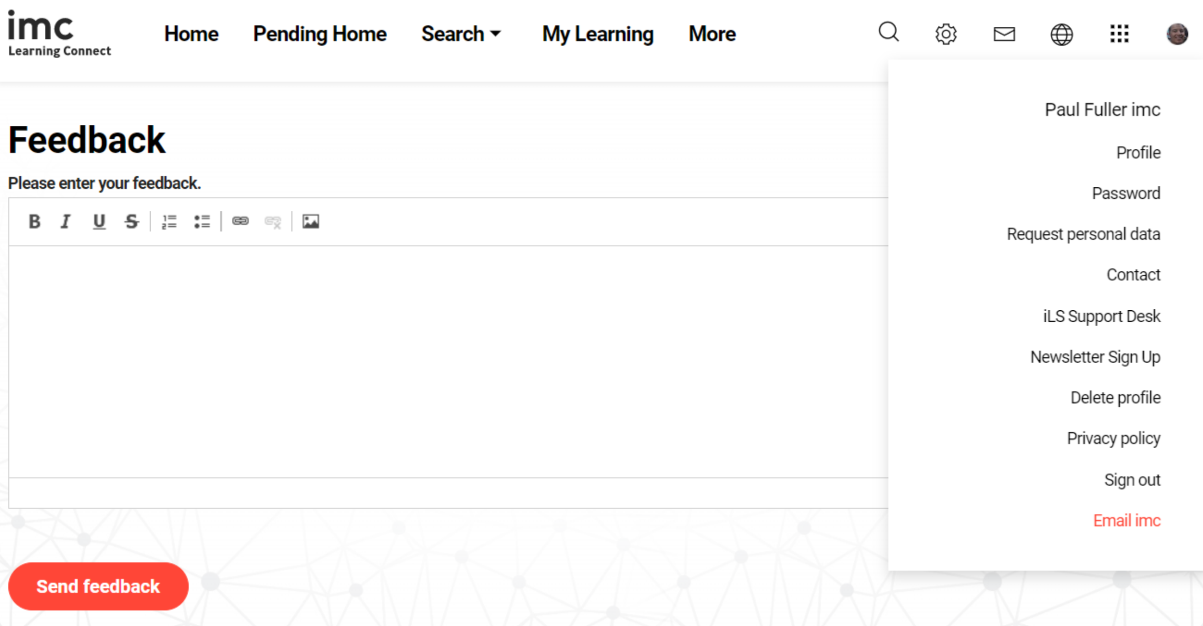
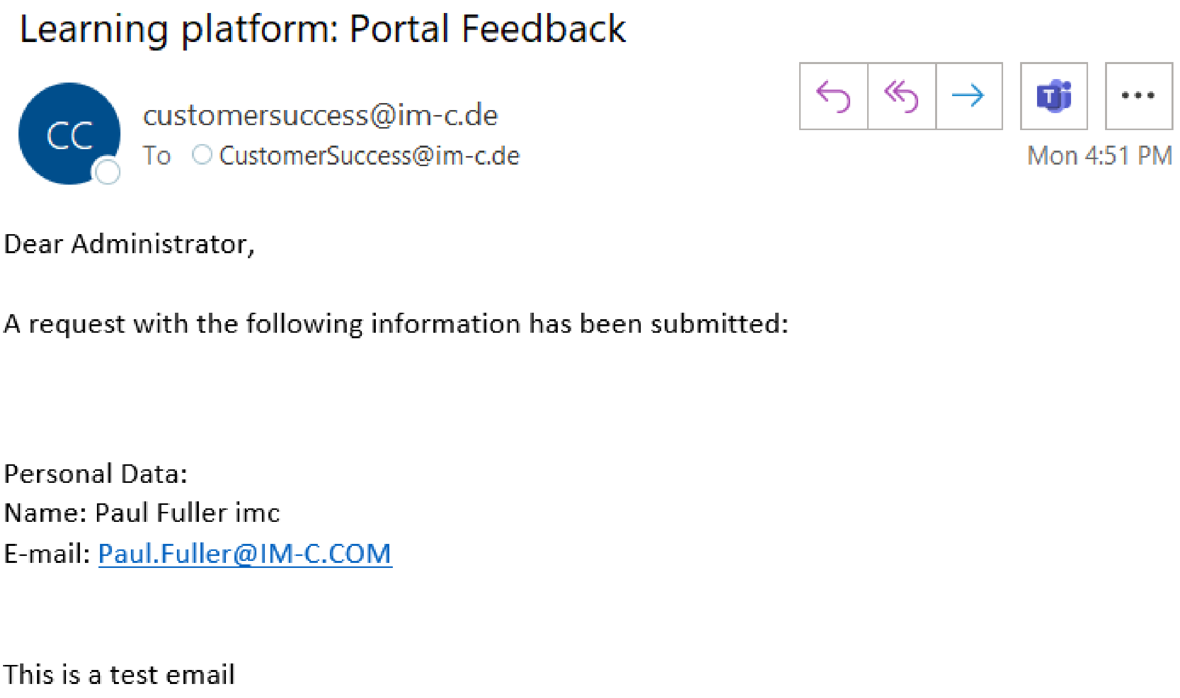


Figure 31: View of submitting feedback via a link.

The email will appear as below with basic personal data of the user and their message. If the introductory or subject text needs to be updated this is done in the 'System texts' function by editing the 'strFeedbackEmailHeaderSignature' or 'feedbackSubject' bundles then activating the change.


Learning platform: Portal Feedback

CC customersuccess@im-c.de
To CustomerSuccess@im-c.de
Mon 4:51 PM

Dear Administrator,

A request with the following information has been submitted:

Personal Data:
Name: Paul Fuller imc
E-mail: Paul.Fuller@IM-C.COM

This is a test email

Figure 32: Sample of email sent via a 'Feedback' navigation link.

11 Email Trouble Shooting Tips

Below is a list of possible email related questions and troubleshooting tips:

- Email is not sent after account creation: This is likely one of three reasons. 1) In the 'Clients' function 'Settings' tab the 'Send login data' checkbox is not ticked, 2) the LMS has not been used to generate either the local Login or Password, and 3) the attribute 'Forward internal e-mail to an external address' may not be ticked on the user's profile.
- Enrolment emails are not being sent: Check the meta tag 'Send enrolment messages' (ID 10132) is ticked on the Course or Learning Path; this might need to be checked at the template level if the meta tag is not visible when editing the training. Then check to ensure that there are active triggers in the 'Enrolment Messages' function that match the configured settings.
- Notifications are not being sent: Check the meta tag 'Send enrolment messages' (ID 10132) is ticked on the Course if Course related; this might need to be checked at the template level if the meta tag is not visible when editing the training. Then check to ensure that the expected Notification is Active and if so check that there are not unexpected filters.
- Emails not being received externally: Check the default value of the person attribute 'Forward internal e-mail to an external address' is ticked. If it is ticked and there are active triggers then there could be a whitelisting issue.
- Emails being treated as SPAM: Ensure correct whitelisting of the system mail server is in place to relay messages on behalf of the intended sender/s. Check if relaying is whitelisted for select email addresses or an entire domain. If emails are being relayed on behalf of the

‘original’ sender ensure their email belongs to the whitelisted domain; E.g. external trainers often have different email domains.

- Emails language is not preferred: The personal attribute ‘Default language for e-mail messages’ determines the user’s preferred language for email messages. If a user has not set their preference on their user profile, or no rules rating ‘Preferred system language’ to ‘Default language for e-mail messages’ are configured, then the emails will be sent in the default language set in the attribute. If allowing users to choose their preferred language it is possible to display the user profile on first login.
- Emails displays incorrectly with HTML code: If there is HTML code displaying in the received emails it is likely that either Enrolment Messages, Notifications or System Texts 70000-70010 were edited in the GUI then Saved whilst the HTML sanitizer was active. To correct such messages will require either restoring the original System Texts or deactivating the HTML sanitizer and reconfiguring the emails by replacing the stripped HTML header tags.
- Errors in ‘System messages’ monitor: There are many reasons errors could be recorded and often these are tracked to the daily system log file which can be downloaded by System Administrators via the ‘Support information’ function. To get the log files highlight ‘100: log files’, click the ‘Execute’ icon and in the popup click the ‘Download’ button. A .zip file will download where inside the ‘filelist_1_1’. To check the log files for an error search the log for entries matching the same time as the message with errors were sent. Many errors though are only recorded in SMTP server logs which are not accessible from within the LMS.
- Remove ability to email tutors and participants via course room: If in the Course Room the ‘Participants’ panel is enabled then the Participants will be able to see each other’s ‘Personal information’ profile and be able to access their email if displayed.

12 Summary

Hopefully it is now clear where email settings are configured and messages are managed. Should there be further questions regarding email configuration or creation, DESK tickets can be raised with the imc Support team.

END OF DOCUMENT