

Event Docu- mentation

IMC Learning Suite 14.15

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1 Event Queues

The IMC Learning Suite provides the option to use an event queue to get real time information on certain events to foster integration scenarios with third party systems.

The following documentation describes the currently available events.

For on-premise installations, the imc Learning suite package includes an Apache ActiveMQ Artemis installation (<https://activemq.apache.org/components/artemis/documentation/>). IMC hosted cloud installation use the Azure Service Bus as the event queue (<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>)

The messages / events are sent as AMQP messages with the information itself in a JSON body. This JSON body is documented here for the individual messages.

The messages / events will be sent to separate topics for the separate / event types and the following topics are used for the respective event types:

Topic name	Event type
de.imc.ils_login	Login Events
de.imc.ils_course-changes	Course Events – Course Changes
de.imc.ils_registrations	Registration Events – all
de.imc.ils_completions	Registration Events – only completions
de.imc.ils_cancellations	Registration Events – only cancellations
de.imc.ils_recert-due-date-changes	Recertification Due Date Events

2 Login Events

The login events are issued whenever a user logs in and also provide the additional information of the past failed login attempts.

2.1 Login attempt (successful)

```
{
  "login": "imc_super",
  "identifier": 2,
  "result": "success",
  "failedCount": 0,
  "timestamp": 1603666208487,
  "summary": "Login attempt for imc_super"
}
```

2.2 Login attempt (failed)

```
{
  "login": "imc_super",
  "identifier": 2,
  "result": "failed",
  "failedCount": 4,
  "timestamp": 1603666208487,
  "summary": "Login attempt for imc_super"
}
```

Parameter	Explanation
login	Login name used for the login attempt
identifier	Internal id of the user
result	Result of the login attempt, either "success" or "failed"
failedCount	Number of failed attempts
timestamp	Timestamp of event sending in seconds since epoch
summary	Short summary of the event / message

3 Course Events

The course events provide information on courses when being created or changed and include basic information of the courses and it's contents.

3.1 Course Change Event

```
{
  „external-id“:“ce77b12d-4119-3390-92e6-000000001517“,
  „object-id“:517282,
  „component-id“:517281,
  „syllabus-link“:“https://achievemore.im-
c.com/ilp/pages/course.jsf?courseId=517281&pollingMode=on#!/courseroo
m/course“,
  „title“:“Course Name“,
  „description“:“<strong>Course Description</strong></br> Description
text“,
  „start-date“:“2021-05-19T00:00:00+0200“,
  „end-date“:“2021-05-19T23:59:59+0200“,
  „duration-of-use“:“M“,
  „learning-form“:“classroom“,
  „lastupdated“:“2020-10-25T23:50:08+0100“,
  „lastupdater-external-id“:““,
  „lastupdater-person-id“:0,
  „metadata“:[],
  „contents“:[],
  „catalog-assignment“:[],
  „timestamp“:1603666208487,
  „summary“:“Update for course 517281 | 517282 | ce77b12d-4119-3390-
92e6-000000001517“
}
```

Parameter	Explanation
external-id	External id of the course if available
component-id	Internal version specific id of the course
object-id	Internal version independent id of the course
syllabus-link	Link to the course room / syllabus in the system
title	Name of the course
description	Description of the course including html formatting
start-date	Start date of the course if date dependent
end-date	End date of the course if date dependent
duration-of-use	Duration of the course if duration of use

Parameter	Explanation
learning-form	Learning form of the course
lastupdated	Date of the last update
lastupdater-external-id	External id of the person that has updated the course last
lastupdater-person-id	Internal id of the person that has updated the course last
metadata	Additional metadata for the course (i.e. all metatags)
contents	List of contents and their metadata (name, link, dates, ...)
catalog-assignment	List of catalog nodes the course is assigned to
timestamp	Timestamp of event sending in seconds since epoch
summary	Short summary of the event / message

4 Registration Events

The registration events are issued for every change in a registration from the initial booking up to the cancellation or completion.

There are three topics available for the registration events, one that covers all events and two that include explicitly the cancellations and completions respectively.

4.1 Registration Change Event

```
{
  "external-id":"ce77b12d-fa54-3353-8e4d-000000000213",
  "identifier":121150,
  "course-external-id":"ce77b12d-4119-3390-92e6-0000000004ac",
  "course-component-id":555791,
  "course-object-id":555792,
  "initial-status":"BOOKED",
  "status":"CANCELLED",
  "due-date":"2020-12-31",
  "expiration-of-qualification": "2021-12-31",
  "price":0.0,
  "currency":"EUR",
  "orderer":2,
  "cancellation-reason": 1,
  "timestamp":1603698662089,
  "summary":"Update for registration for course 555791 | 555792 |
ce77b12d-4119-3390-92e6-0000000004ac and user 121150 | ce77b12d-fa54-
3353-8e4d-000000000213"
}
```

Parameter	Explanation
external-id	External id of the user if available
identifier	Internal id of the user
course-external-id	External id of the course if available
course-component-id	Internal version specific id of the course
course-object-id	Internal version independent id of the course
initial-status	Registration status before the change
status	Registration status after the change
due-date	Due date for the course
expiration-of-qualification	Value for expiration of qualification given by the course, if set
price	Price for the registration either course price or cancellation fee
currency	Currency for the price
orderer	User that triggered the change

Parameter	Explanation
cancellation-reason	ID of the cancellation reason if status is cancelled
timestamp	Timestamp of event sending in seconds since epoch
summary	Short summary of the event / message

4.2 Status Mapping for Registrations

4.2.1 Statuses for Courses / Learning Paths

Status String (Event)	ID	Status
NULL	0	No relation
SELECTED	1	On the wish list
ORDERED	2	Requested
AGREED	3	Confirmed
NOTIFIED	4	Notified
REFUSED	4	Not confirmed
WAITING	6	Waiting
CANCELED	7	Cancelled
BOOKED	8	Enrolled
STARTED	9	In progress
FINISHED	10	Concluded
PASSED	11	Passed
FAILED	12	Failed
INDIVIDUAL_LEARNING_PLAN	17	Personal syllabus
RESERVED_ON_PARTICIPANT_LIST	18	Reserved
RESERVED_ON_WAITING_LIST	19	Reserved on waiting list
DELETE	13	Deleted

4.2.2 Statuses for Course Templates

Status String (Event)	ID	Status
PREBOOKED	16	Pre-booked
SUCCESSFULLY_COMPLETED	20	Recertification: passed a course
NOT_SUCCESSFULLY_COMPLETED	21	Recertification: failed a course

5 Recertification Events

The recertification events provide additional information on the due dates inside a recertification process. Whenever a new due date is calculated inside the recertification process that is not yet attached to a specific course registration an additional event is emitted.

5.1 Recertification Due Date Change Event

```
{
  "external-id":"ce77b12d-fa54-3353-8e4d-000000000213",
  "identifier":121150,
  "template-external-id":"ce77b12d-4119-3390-92e6-0000000004ac",
  "template-component-id":555791,
  "template-object-id":555792,
  "due-date":"2020-12-31",
  "timestamp":1603698662089,
  "summary":"Update for recertification 555792 | 121150 | 2020-12-31"
}
```

Parameter	Explanation
external-id	External id of the user if available
identifier	Internal id of the user
template-external-id	External id of the template if available
template-component-id	Internal version specific id of the template
template-object-id	Internal version independent id of the template
due-date	Due date for the next recertification. This will be set on completion of one course of the template before the next course is booked in a recertification scenario. It will be cleared when the next course is available, and a user is registered / booked to it. The due date is transferred to the course and is also provided in the registration change event.