

LMS – MS Teams Integration

Requirements Document

V0.1

Document Change Control

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About the Document

## Document Purpose and Scope

The objective of this document is to achieve the required integration between the LMS and MS Teams to ensure all the specifications and requirements of the use cases are detailed all the functional and quality requirements.

## Document Conventions

### Mandating Verbs

The keywords “SHALL”, “MUST”, “SHOULD”, and “MAY” in this document are to be interpreted as follows:

SHALL: Mandatory requirement; the system/component will be useless without it (most requirements are written with shall)

MUST: Mandatory constraint; a rule that the system must apply

SHOULD: Suggestive requirement; the system will not be useless without it

MAY: An optional (nice-to-have) requirement that can be skipped

### Requirements Numbering Conventions

Requirements in this document have been given prefixes that indicate their type (or the system function they belong to).

Prefixes follow the structure [“REQ” + “- “+ “module abbreviation” +”-” + Requirement serial number]

REQ-TST = Teams Sync Tool.

# 

Glossary of Terms

|  |  |
| --- | --- |
| Term | Definition |
| MS Teams | Microsoft Teams |
| LMS | MOE Learning Management System |

Table : Glossary

# 

About the Project

## Stakeholders

|  |  |  |  |
| --- | --- | --- | --- |
| Name/Title | Role in the project | Contact Info | Type |
| Ines Zaghouani | Program Manager |  | Client |
| Mohammad Al Omari | Senior Business Analyst |  | Client |

Table : Stakeholders

## Business Background

The Ministry of Education’s (MOE) ecosystem uses MS Teams as its communication platform to deliver distance learning that enables the collaboration and communication between students and teachers. In order to support teachers and facilitate conducting distant virtual classes between teachers and students, LMS will integrate with MS Teams through the mentioned use cases.

## Project Purpose

## Project Scope

### In Scope

To enable the integration between MS Teams and MOE LMS, each class in LMS should be linked by pre-created team in MS Teams. Teams Sync Tool shall link each class in LMS by its related team in MS Teams; and sync between the courses that are related per each class with the related channels of the related team.

### Out of Scope

*List the out-of-scope requirements (these are requirements that the client requested but cannot be covered in the project).*

## Assumptions, Dependencies, Constraints, Risks

### Assumptions

* There are pre-created teams in MS Teams for the classes of MOE.
* Sync tool from LMS to MS Teams. So LMS is the source and MS Teams teams is the destination.

### Dependences

* MOE LMS is up and running.
* MOE SSO integration is done for MS Teams.

### Constraints

N/A

### Risks

N/A

System Overview

Created classes in LMS should be linked by pre-created teams in MS Teams through Teams Sync Tool and syncing between the courses that are related per each class with the related channels of the related team. the courses in LMS is the source for the sync tool and the MS Teams teams are the destination where those teams are pre-created by sync data tool.

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User Profiles

|  |  |
| --- | --- |
| User Role | General Description |
|  |  |
|  |  |
|  |  |

Table : User Roles Description

Functional Requirements

## UC-0 | Teams Sync Tool

### Requirements Description

* [REQ-TST-01] Sync tool from LMS to MS Teams. So LMS is the source and MS Teams teams is the destination.
* [REQ-TST-02] Each class in LMS shall have only one team in Teams in MS Teams.
* [REQ-TST-03] The Teams shall be pre-created in MS Teams.
* [REQ-TST-04] The sync tool shall link each class in LMS by its team in Teams in MS Teams using the class’s unified Id.
* [REQ-TST-05] Each class in LMS has multiple courses, so the sync tool shall create a public channel for each course under its linked team in Teams in MS Teams.
* [REQ-TST-06] In case the channel of the course doesn’t exist in teams in MS Teams, so the tool shall create it.
* [REQ-TST-07] In case the name of the course has been updated in LMS, it should be reflected in its channel name.
* [REQ-TST-08] All the created channels by the tool are public channels.
* [REQ- TST-10] Deletion scenarios
* [REQ-TST-11] The sync tool shall be executed periodically to sync the courses and channels between LMS and MS Teams.
* [REQ-TST-12] In case the user changing the title of the channel in MS Teams, so the tool shall update it in the next run of the tool with the value in LMS
* [REQ-TST-13] In case the tool created a channel so it already exists in the mapping between LMS and MS Teams, so the tool shall not recreate it again if it is deleted by the user in MS Teams.

Integration/Interfaces

* The sync tool shall call MS Teams APIs and LMS APIs.

Non-Functional Requirements

*Make sure these requirements are measurable so that testers can verify if they were satisfied.*

## Capacity and Performance Requirements

*Capacity and performance are essential in any project.*

*Ex: What is the bandwidth, latency, and packet loss? What is the configuration of the production environment at the customer site?*

*Put these requirements in a table format, and should be communicated clearly to the testing team:*

You can ask the PM on the customer side to provide this information from the customer’s IS department. Note that if the customer has an existing system, you might ask him to provide you with the IS log for a certain period of time (ex: one week).

|  |  |  |
| --- | --- | --- |
| Factor | Ranges | Required |
| What is the max number of users will the web site sustain? | < 10 |  |
| >10 |  |
| How many times a particular transaction will be performed per unit of time? | < 10 searches per hour |  |
| >10 searches per hour |  |
| How many records will be stored in the database of the main business entities (such as customers)? | < 10,000 |  |
| >10,000 |  |
| What is the acceptable system response time? | From 3- 10 seconds |  |
| What is the pages hit ratio (which pages are more likely to be used by the users)? | Login < 10 per minute |  |
| Login > 10 per minute |  |
| If users will use a WAN, what type will be used (Internet or Leased Line)? | Internet |  |
| Leased Line |  |
| What is the type of environment | Normal or Complex |  |
| Very Complex |  |
| Is this system a backend or front end : | Backend only |  |
| Backend and front end |  |
| If backend , How many admins will be using the backend web site | One Admin |  |
| More than one admin |  |

Table : Capacity and Performance Requirements

Exception Handling

*If an exception occurs (such as if the number of users exceeds the maximum, a message may appear: System is temporarily unavailable, try again latter).*

## Security Requirements

*When applicable, document the following:*

*Authentication*

*How will the system authenticate users? Passwords are the commonly used method. But sometimes users are authenticated using smart cards, photos, fingerprints, or else.*

*How will passwords be structured? Are there any specific characteristics for the passwords? For example, must they be of particular length, contain numbers with letters, or mix capital with small letters (case sensitive)?*

*How many failure attempts will be allowed? Will the system allow the user to retry login using wrong passwords endless times or will it stop him after certain number of attempts?*

*If the system will stop users after a number of invalid trials, what happens next? How will the user recover the password? Will the system send him a new password for example?*

*Sensitive Data*

*Is there and sensitive data that the system needs to protect (ex: royal personal data or credit card numbers)?*

*Against what should the data be protected: only update or delete; or even viewing?*

*How serious is the threat risk? How important it is for the client’s business to protect the data? What will the client loose?*

*Communicate with the technical team to know the solution they are providing for these issues and document them here to ensure the customer is happy with the solutions. Solutions can be: HTTPS, SSO, encryption, certificates, etc.*

Exception Handling

*What happens when a breach is attempted or if the system fails in any aspect of the security?*

## Data Migration Requirements

*If the client has existing data that should be migrated, mention this here.*

## Technology Requirements

*Enter here any specific technology requirements, such as .NET or SQL Server.*

## Client Operational Environment and System Requirements

*Put here the specifications of the client’s operational environment; such as server platform and capacity, user machines configuration, communication methods (Intranet, Internet, VPN, etc) and speed. You can use text or diagram.*

## User Interface and Usability Requirements

*If the customer expresses any requirements about the system usability, mention them her.*

*Example Requirement:*

*Users shall be able to understand the interface without external guidance.*

*The length of all system messages must be less than three sentences.*

## Availability Requirements

*When applicable, mention:*

* *Acceptable percentage of availability*
* *Tolerated down time*
* *Meantime between failures*

Acceptance Criteria

This requirements document used as the basis for defining the project acceptance criteria, to ensure common understanding of these criteria, this document needs to be reviewed and signed off by the client.

The test cases produced by ITWorx Education team will prove as internal measure by which ITWorx Education will aim to ensure acceptance. User acceptance testing will be done when the application being deployed, and it will be based on the requirements defined in this document.