### MigrationWiz - Teams Private Chat Feature Development at Clomotech

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- 1 Introduction
- 2 Leaning Outcomes
- 3 Contributions
- 4 Conclusion
- **6** Acknowledgement



- 1 Introduction
  - What's & Why's The Platform MigrationWiz? The Project I worked upon
- 2 Leaning Outcomes
- 3 Contributions
- 4 Conclusion
- 6 Acknowledgement



- 1 Introduction
  - What's & Why's The Platform MigrationWiz?

The Project - I worked upon

- 2 Leaning Outcomes
- 3 Contributions
- 4 Conclusion
- 6 Acknowledgement



Introduction

#### What's & Why's The Platform - MigrationWiz?

- Software as a service (SaaS), facilitating efficient migration of workloads across different domains
- Workloads Files, emails, calendars, documents, messages, chats, etc.

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#### Illustrating Practicality

- Company 'A' undergoes acquisition by Company 'B'
- Company A's employees had workloads in @a.com domain
- However, following the acquisition, the domain changes to @b.com
- To gain access to their valuable workloads to the @b.com domain becomes imperative
- Here an ideal solution is MigrationWiz.



- 1 Introduction
  - What's & Why's The Platform MigrationWiz?
  - The Project I worked upon
- 2 Leaning Outcomes
- 3 Contributions
- 4 Conclusion
- 6 Acknowledgement



#### The Project - I worked upon

- For migrating Microsoft Teams chats, initial functionality offered by the product entailed transferring 1:1 chats, group chats, and meeting chats as emails to the destination domain.
- Updated requirement: Direct migration of chats to the Microsoft Teams destination, referred to as "Rehydration".
- A new project, named "Teams Private Chat (Rehydration)", was initiated under the MigrationWiz platform and I actively contributed as a member of development team.

- 1 Introduction
- 2 Leaning Outcomes
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    Skills
    Challenging Bit
- 3 Contributions
- 4 Conclusion
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- 2 Leaning Outcomes Tools & Technologies Skills Challenging Bit
- 3 Contributions
- 4 Conclusion
- 6 Acknowledgement



#### Tools & Technologies

#### Programming Languages & Frameworks

- C#
- JavaScript
- EmberJs

#### DevOps & Version Control System

- AzureDevOps
- Git

#### Development IDEs

VS Code & Visual Studio



- 2 Leaning Outcomes

  - Skills

- Contributions
- 4 Conclusion
- 6 Acknowledgement

- Effective Teamwork & Communication:
   Various Collaboration Tools and crucial in code review process.
- Project Management: Planning, allocation and task prioritization. Tools like JIRA and Confluence.
- Stearning Methodology Shift & Time Management Skill: Academic learning vs Industrial learning. This shift necessitates a reorientation of learning approaches.

- 1 Introduction
- 2 Leaning Outcomes

Challenging Bit

- Contributions
- 4 Conclusion
- 6 Acknowledgement



Introduction

#### **Code Navigation**

- There is an array of migration services offered by MigrationWiz. So codebase was indeed too large especially for navigation.
- There are some general DTOs already build to return and pass the data among functions.
- To return some processed or fetched data I had to look the definition of these DTOs frequently and this led me to spent far more time on navigating respective DTOs than the backend logic itself of the task!!
- To overcome this I made a note for lookup which helped me for fast navigation.
- Still looking for a better solution!



- 1 Introduction
- 2 Leaning Outcomes
- 3 Contributions
- 4 Conclusion
- 6 Acknowledgement

#### Migration Summary

- Upon selecting a particular line item the user will be seamlessly redirected to the corresponding line item detail page.
- As per the requirement, this detail page should encompass a comprehensive summary outlining the total count of chats successfully migrated, along with those that encountered errors.
- As part of the API implementation, After fetching chat threads I conditionally counted successful and failed 1:1 chats, group chats, and meeting chats and returned these counts through a custom DTO.



#### Retry Error

- The requirement for this feature is that sometimes, due to some errors, complete migration cannot take place, resulting in the possibility that some of the chat - threads may not have been migrated in a migration pass.
- Therefore, to address this issue, there had to be a new feature that allows users to perform migration again, as a subsequent pass, ensuring that all chat threads can be restored.
- For this I needed to get the migration status of selected project items and then return the list of failed project items.
- Here using Azure storage API, I had made a string formed complex azure table query to get chat threads of selected items.



#### RnD - Team Chat Data Storage

- Task of researching and documenting the storage mechanism employed for Teams chat data.
- This involved a thorough examination of the codebase of previous projects, leading me to discover that Teams chat data is predominantly stored using cloud storage services such as Azure Blob and Amazon S3 bucket, adhering to the specific requirements of each project. And creds to access cloud resources are stored in SQL tables.
- During my exploration, I delved into the intricacies of Azure Table Storage Design Patterns, aiming to enhance the performance and efficiency of the current project.



#### Resolving Select All Functionality

- Functionalities available to perform on selected line items in the project - migration, clean-up, retry error etc.
- There was a button named 'select all' in the menu bar of platform.
- Issue with this 'select all' button while performing any of the aforementioned functionality.
- I tested all of the above functionalities with both working and non - working scenarios, that's with manually selecting individual line items and with using the 'select all' button.



# Setup and Configuration of Development Environment for Project Execution

- In the last months of project, QA team needed to have fully project environment configured virtual machines with some specific setup requirements for QA automation.
- We all interns got our VMs ready for project execution, so we were not aware of this meticulous step. I gone through the whole documentation for the same in Confluence and provided the required VMs with specific setup to the QA team.

- 1 Introduction
- 2 Leaning Outcomes
- 3 Contributions
- 4 Conclusion
- 6 Acknowledgemen

- Invaluable opportunity to work on live projects, immersing myself in the world of software development industry.
- This hands on experience allowed me to grasp the workings of agile development methodologies, emphasizing the significance of adhering to coding standards and adopting efficient tools and technologies.
- In addition to acquiring these skills, I successfully completed all assigned tasks, contributing to the development of essential functionality for MigrationWiz.

- 1 Introduction
- 2 Leaning Outcomes
- 3 Contributions
- 4 Conclusion
- **6** Acknowledgement

#### Acknowledgement

- Grateful to Prof. Abhishek Jindal for helping throughout the BTP project and additionally for allowing me to submit the BTP report late for a genuine reason.
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## Thanking You!

