



Popup Help

An eXfinity Work
Partnership Solution

POPOP HELP DESK

Auto identification of possible issues/provide pro-active help/alert by tracking routine user actions.

FUNCTIONAL

USE CASE

Provide a feature (silent /background) to analyze user outlook emails and other sources interacted by user and understand his routine work/future plan of action, which can then help the user in a pro-active way (instead of providing help on user request).

Scenario 1

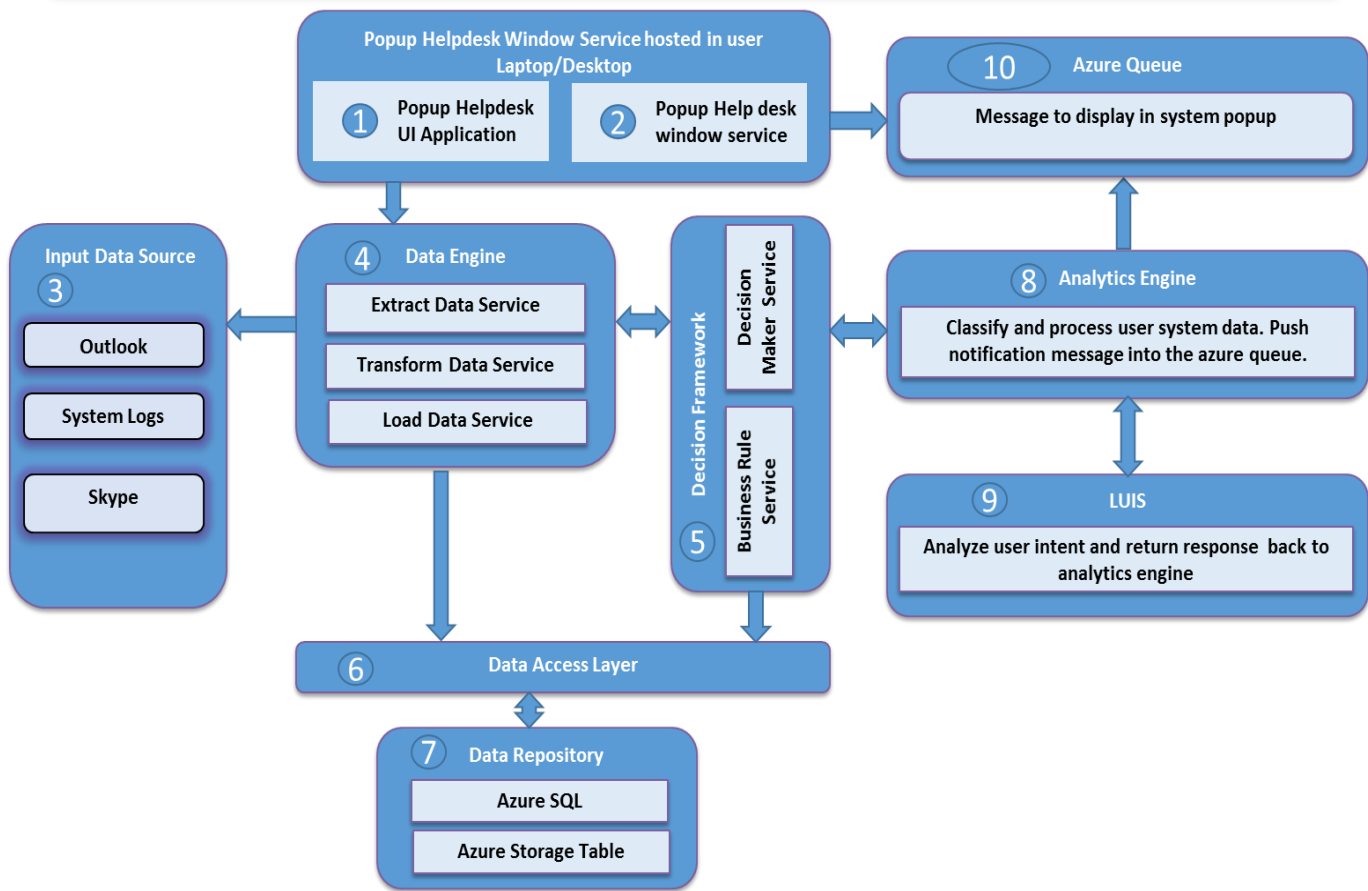
Alert on leave, Auto setup OOF, raise leave in LMS - Analyze user outlook emails and Skype conversations to understand end-user's leave plan. Display a popup to user one day before the leave-day and get a confirmation whether to set OOF, initiate leave request. Also the help desk will check other sources (like weather channels, current affairs to find any risks on going out and provide suggestions to assist him utilize his leave fully). On confirmation from user, the help desk will set OOF in outlook, initiate request in LMS.

Scenario 2

Personal / official plan Alert – based on an onetime setup of his weekly/monthly routine activities, the help desk can popup alert windows- 1 hour/2 hours/1 day (configurable) before the specific activity (like filling timesheet, send status report weekly, jogging weekly once, car insurance yearly once, general health checkup yearly twice etc.) and also will provide additional inputs for that activity (like providing all matching conversations/outlook emails related to that activity like - status report/tasks). We can also make it more interesting with a 24/7 listener service installed in his/her workstation to track his/her activities and automatically understand his daily/weekly/monthly routine and suggest him next week' plan.

TECHNICAL ARCHITECTURE

Popup Helpdesk – Technical Flow



- 1) UI App to display Popup
- 2) Window service intermittently check user system and pass the data to data engine for further processing. Service will also be responsible for checking any popup message that has to be displayed to the user. There are couple of option to implement same
 - Store message in DB or
 - store in azure queue
- 3) Input data source: The data source to analyze and understand that any pending action needed user attention.
- 4) Data Engine consist of three services
 - a. Extract data from different sources based on the decision framework that holds the business rules. E.g. Business Rule1 : Check user emails for any important meeting on company holiday.
 - b. Transform extracted data into the predefined schema as per the business rule and push to the LoadData service.
 - c. Load data service communicates with data layer and push data into the data repository.
- 5) Decision Framework - Decision framework contain the Business Rule and Decision Maker service
 - a. Decision maker service decides the relevant data has to extract from the user system data.

- b. Business rule service map the user intent to the predefined actionable decision popup to user.
- 6) Data Access Layer - Service contain the data operation to push data into the data repository or get data from data repository.
- 7) Data repository - Azure SQL to hold configuration, transformed data and Azure Storage for Exception or Logging.
- 8) Analytic Engine - Process user data and check the LUIS response. If the LUIS returned response with score more than 70%, check decision maker service for the relevant response.
- 9) LUIS: Check LUIS to extract the meaning out of the user extracted data or can be used any other natural language processing (google analytics) engine and returned response back to the Business Analytic Engine.
- 10) Azure Queue: Analytic engine will push message into the azure queue with user email as part of payload. The window service periodically checks azure queue for pending message.

TECHNOLOGY CHOICE

Functionality	Technology	Comment
Get data from Outlook 365	Microsoft graph APIS	Microsoft Graph APIs to access Outlook mail, calendar, and contacts.
Get data from LMS	Web API hosted in Azure	Get data from leave management system, data source may vary should be configurable.
Process Data	Web API hosted in Azure	Extract data and push data to analytical engine
Extract meaning out of data	LUIS	LUIS to check the mail intent. Note : Checking if any other open source analytical engine available.
Popup Message Service	Windows Communication Foundation service that is hosted by a Windows Service.	Windows Communication Foundation service that is hosted by a Windows Service.
Data Repository	Azure Storage Table and SQL	Exception, Audit records in azure storage table. Configuration data in either SQL or json config files.
Notification	Azure Queue	Push notification message into the azure queue. The window service periodically check azure queue.