CUSTOMER SUCCESS STORY

Leading Multinational Bank Integrates Search and Chatbot Capability using NLP/NLU – Driving Customer Engagement and Self-Service.

Headquartered in New York and with a presence in every major city across the world, our customer is the Treasury business unit of an American Multinational Investment Banking Services Company. With over $380 billion in total assets, and $1.9 trillion in assets under management, they are the largest custodian bank and asset servicing company in the world.

Objective

- To build and integrate a customized NLP chatbot solution into the banks existing customer portal to enable customer self-service.
- To assist the bank's treasury customers and business users in finding answers to requests - a lot quicker, and with higher accuracy - boosting the overall productivity

Roadblocks

- As is common, the existing nature of the bank's business posed a series of challenges – from architecture and integration, to implementation, and security.
- This meant that solutions built for the bank had to be:
  - Highly customizable and easy to use, comply with multiple authorizations, compliance standards, and security protocols.

Solution

- Architected and enabled an NLP and NLU Chatbot solution using Rasa.
- Integrated RasaX – empowering the admin with UI to view where users could easily train and optimize their Chatbots on the fly.
- Built models that modified metadata requests received in Rasa to successfully pass all OAuth credentials.

Results

- Replaced manual research interactions with self-service customer interactions with the help of Chatbot Solution.
- This drastically improved the banks' ability to process multiple requests in a day, at a much higher accuracy in a shorter time that earlier anticipated - boosting workforce productivity and customer satisfaction.

Technology Stack

RASA
NEXUS SOFTWARE™
Merlin BUSINESS SOFTWARE
GitLab
Jenkins
RabbitMQ™
docker
Jira Software
mongoDB®

Business Objective

BOOST CUSTOMER SATISFACTION AND WORKFORCE PRODUCTIVITY

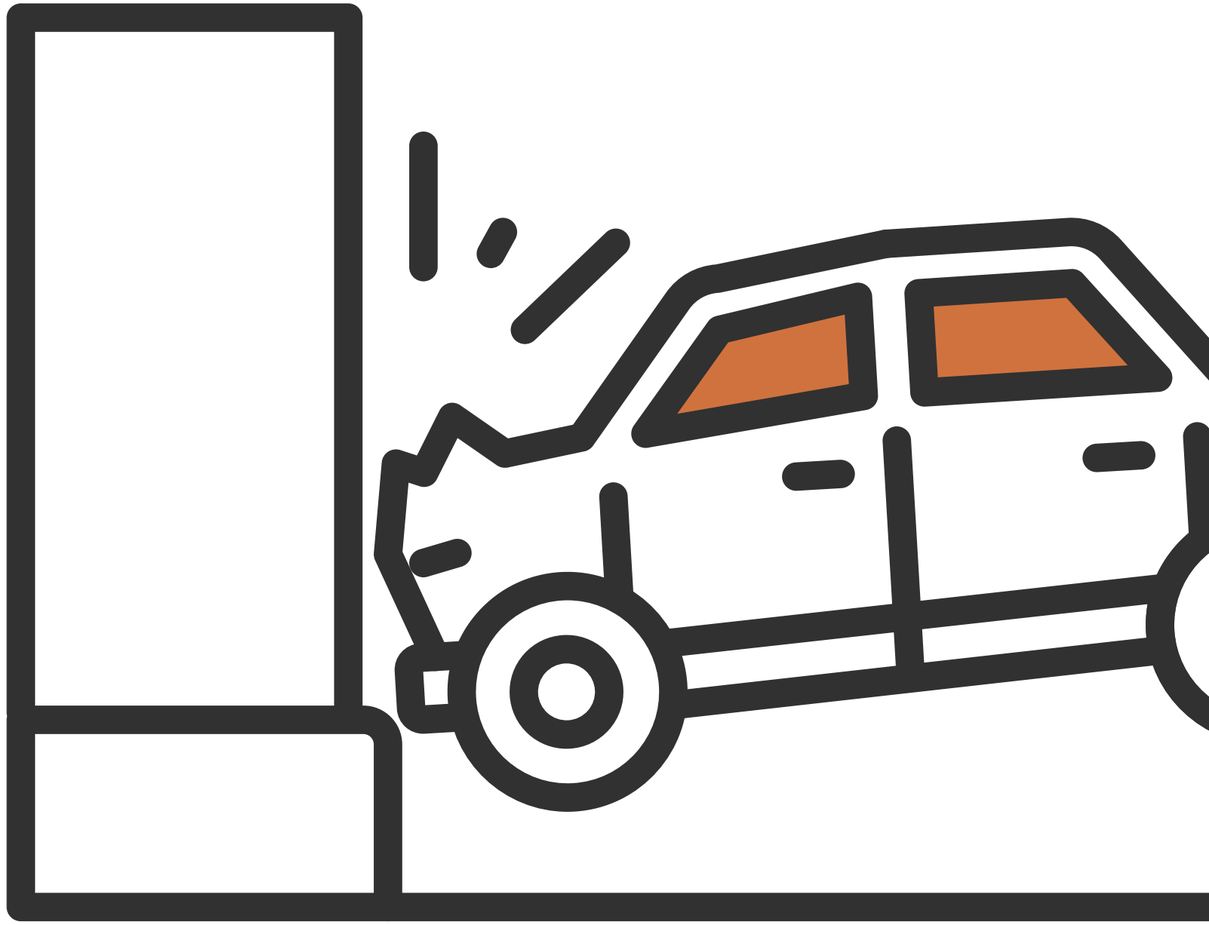
To build and integrate a customized NLP chatbot solution into the banks existing customer portal to enable customer self-service.

To assist the bank's treasury customers and business users in finding answers to requests - a lot quicker, and with higher accuracy - boosting the overall productivity of the bank's workforce and improving customer service.

Roadblocks

Existing ecosystem of the bank proved to be extremely challenging to implement third-party solutions that complied with all protocols.

- The AppEngine (existing container framework) proved to be the most challenging aspect of the project.
- The current environment used by the bank requires you to run all containers as non-root containers – requiring fit-to-purpose customizations.
- USEReady had to build and integrate security on NLP Chatbot solution - ensuring that all calls made to the BIDS API are secure.



Solution

TECHNOLOGIES USED

RASA

GitLab

Merlin
BUSINESS SOFTWARE

Jenkins

Jira Software

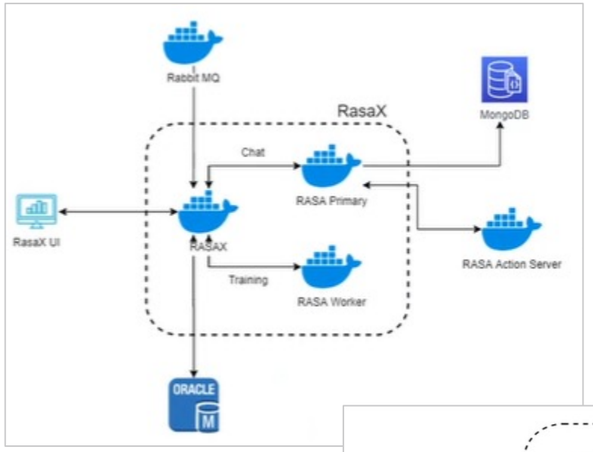
mongoDB.

RabbitMQ

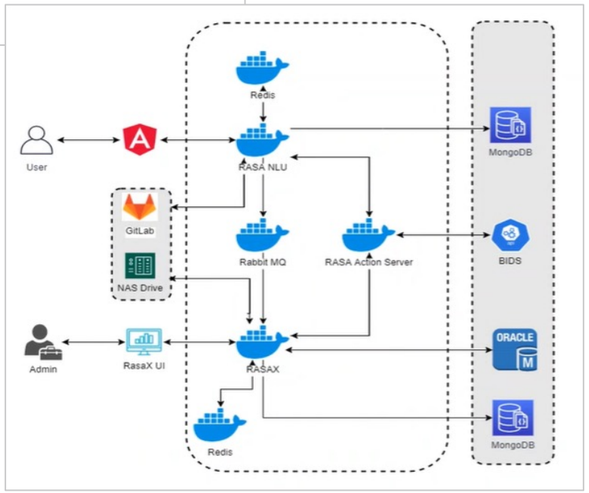
docker

NEXUS SOFTWARE

Solution



Chatbot Training Architecture



Solution Architecture

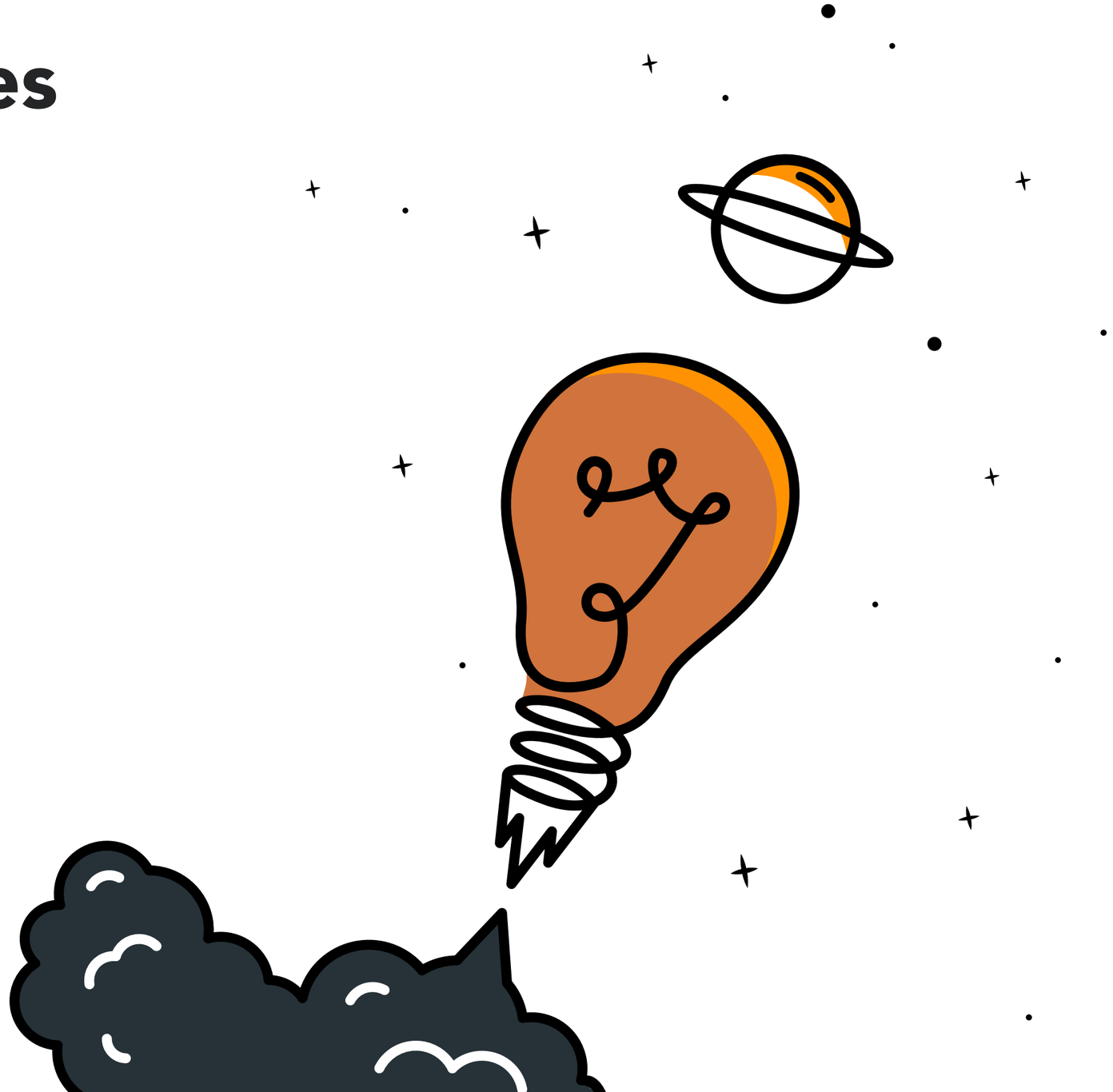
PROJECT HIGHLIGHTS

Architected and implemented fit-to-purpose models and workflows:

- Used Rasa to create a chatbot that helps successfully identify the intent of what the user asked for.
- Rasa Action Server successfully performs an action according to the intent.
- Enhanced the platform interface by engineering an integrated search and chat capability using NLP/NLU to verbally query transactional data.
- Merged chatbot solution with the banks BIDS API (where all the information such as transactions, summary, reconciliation etc. is housed)
- Built a UI for the admins using RasaX, allowing admins to view requests in real-time, and further train their chatbots.

Results And Outcomes

- Helped transform a time-consuming and manual process – giving users answers to requests a lot faster and creating more available time for users to be better productive.
- Enhanced the platform interface Search and Chat architecture and capability, using NLP/NLU to verbally query transactional data. (AWS EC2, S3, Sagemaker, EMR, Kinesis)



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