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PEGA Robotics as a Service: Transforming Business Operations with Scalable Automation

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Abstract: ***In an era where efficiency and agility are paramount, Robotic Process Automation (RPA) has emerged as a pivotal tool for organizations striving to streamline operations and reduce costs. PEGA Robotics as a Service (RaaS) offers a reusable solution that leverages the capabilities of RPA to deliver scalable, efficient, and cost - effective automation. This research paper explores the concept of PEGA RaaS, its architecture, implementation strategies, and the transformative impact it has on business processes. Through case studies and analysis, this paper highlights the benefits, challenges, and future prospects of integrating PEGA RaaS into enterprise workflows.***

Keywords: PEGA, Robotics, Robotic Process Automation, Robotic Desktop Automation, Reusable Solution, Email Bot

1. Introduction

a) Introduction to PEGA Robotics Automation

Pega Robotic Automation is a powerful solution designed to automate repetitive tasks and manual workflows by seamlessly integrating various software systems. It excels in automating routine tasks that recur within a workflow, enhancing efficiency and reducing human error. Pega Robotics leverages the user interface of existing applications to automate these tasks, significantly accelerating manual processes and optimizing user actions.

There are two types of Pega robotic automations: [1]

- **Desktop Automation (RDA) -** Desktop automations enhance the user experience by integrating and automating desktop or web applications with Pega 7 applications, providing a seamless desktop environment. These automations allow desktop or web applications to be launched from flow actions, enabling data to be transferred between the workflow and desktop applications efficiently. By automating these processes, desktop automations significantly reduce redundant tasks, such as copying and duplicating data across multiple applications. This not only decreases the time a CRM representative spends on the phone with customers but also minimizes data entry errors that can occur from repeatedly inputting the same information. [2]

- **Process Automation (RPA) -** Pega RPA provides tools that you can use to automate repetitive work, so your employees can focus on your customers and more creative tasks. The automations that you create can bridge the gaps between the various software applications that you use, eliminating the time spent starting and navigating through those applications so you can integrate your legacy systems and information. With Pega RPA, you can speed up processes, eliminate errors, and get work done fast. Pega RPA consists of tools to build and then run robotic automations (Pega Robotic Automation), and an application to manage the robots, Pega Robot Manager.

b) Research Objective/Scope

This paper aims to analyze the architecture and components of PEGA Robotics, explore its implementation strategies across various industries, assess its impact on business efficiency and productivity, identify the challenges and best practices associated with its deployment, and forecast future trends and developments in the field of RPA. The scope of the research encompasses the technical aspects of PEGA Robotics, its practical applications, and its implications for business operations. It includes a review of current literature, case studies from different industries, and expert insights to provide a comprehensive understanding of PEGA Robotics.

2. Case Study: PEGA Email Bot

a) Pain Areas/Challenges

Managing the daily email volume is challenging under normal circumstances. In times of major crises and rapidly changing markets, this difficulty intensifies. Such conditions place significant strain on customer experiences, employee productivity and existing processes giving rise to challenges like:

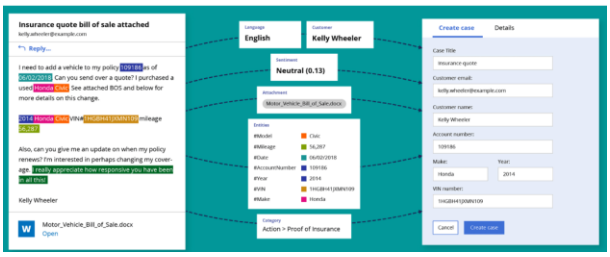
- The customer managing hundreds of email boxes through which various business operations received work requests.
- Manual and cumbersome intake process through Email DL.
- Customer retrieving data manually from emails, validating the information across multiple systems to complete the request.
- In effective work assignment and management from these email boxes causing slippages in performance guarantees, leading to penalties and customer dissatisfaction.
- Lack of a management dashboard to track and manage work in the email boxes to meet SLAs.

b) PEGA Email BOT: Key Solution Features

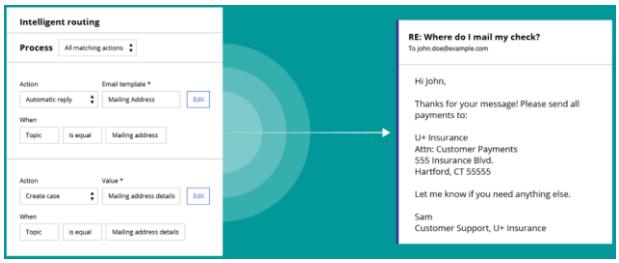
Utilizing Pega Email Bot, large volumes of emails can be efficiently managed to meet the demands of today's fast - paced market. This tool enables timely and personalized responses for customers, enhances operational efficiency, and allows employees to prioritize and strengthen customer relationships. [3]

Interpreting human language - Given the varied structures of emails and the potential for crucial details to be embedded in attachments, the Pega Email Bot utilizes natural language

processing (NLP) text analysis. This enables swift comprehension of email topics, contextual understanding, and automatic extraction of essential information.



Executing tasks via email - Whether it involves updating an address, requesting a new card, or providing supplementary details, the Pega Email Bot employs robust case management techniques. It initiates and prioritizes tasks to the appropriate individual or system, ensuring their progression until completion.



Continuously evolving - Each email is captured and integrated into Pega's machine learning algorithms, enhancing precision and adapting to the dynamic shifts within your business environment.

Understanding customers' context - Beginning with email, the Pega Email Bot extends this customer journey seamlessly to chat, web, and mobile platforms. Irrespective of the chosen interaction channel, it maintains context across all channels, ensuring a uniform and cohesive experience for customers.

3. Robotics as a Service (RAAS)

Robotics as a Service (RAAS) operates as an asynchronous service call, enabling robots to execute various tasks such as fetching data, updating data, or interfacing with applications through the interrogation of screen data elements. These service calls are not limited to Pega; they can be initiated from any application. Essentially, RAAS provides a versatile toolkit of reusable robotic components adaptable to diverse automation needs. This framework empowers organizations to streamline their automation solutions efficiently, enhancing productivity and scalability across their operations. The aforementioned Email Bot can be abstracted into a Service, facilitating its reuse throughout the organization. This projection allows for the extension of functionality across multiple email boxes with minimal implementation effort. Additionally, it enables deployment to various departments within the organizational structure, enhancing operational efficiency and promoting cross - functional collaboration.

4. Benefits of RAAS model

Reusability - The RAAS model promotes the creation of modular and reusable robotic components, allowing organizations to efficiently leverage automation solutions across various business processes and workflows. This reusability minimizes redundant development efforts, enhances consistency, and streamlines maintenance tasks.

Speed to market - By abstracting robotic functionalities into reusable services, the RAAS model facilitates rapid development and deployment of automation solutions. Organizations can swiftly respond to market demands, launch new products or services, and stay ahead of competitors by accelerating their time - to - market.

Platform agnostic - RAAS model abstracts automation functionalities from underlying platforms and technologies, enabling compatibility with diverse IT infrastructures. This platform - agnostic approach ensures seamless integration with existing systems and applications, regardless of the underlying technologies, ensuring flexibility and future - proofing automation investments.

Efficient usage of Bot licenses - RAAS model enables organizations to optimize the utilization of Bot licenses by centralizing the management and orchestration of robotic processes. This centralized approach ensures efficient allocation of resources, minimizes license wastage, and maximizes the ROI on automation investments.

Easier to scale based on volumes - The RAAS model facilitates scalable automation solutions that can dynamically adjust to fluctuating workloads and business volumes. Organizations can easily scale their automation initiatives up or down in response to changing demands, ensuring operational efficiency and cost - effectiveness.

Increased velocity of development of automation - By providing a standardized framework for developing and deploying robotic services, RAAS accelerates the pace of automation development. This increased velocity enables organizations to rapidly prototype, iterate, and roll out automation solutions, driving continuous improvement and innovation across their operations.

5. Conclusion

PEGA Robotics as a Service represents a transformative approach to business process automation, offering scalable, efficient, and cost - effective solutions. By leveraging cloud technology, AI, and machine learning, PEGA RaaS enables organizations to streamline operations, reduce costs, and enhance productivity. While challenges exist, careful planning and implementation can unlock significant benefits, positioning businesses for success in an increasingly automated world. Future advancements in AI and cloud technology promise to further enhance the capabilities of PEGA RaaS, making it a cornerstone of digital transformation strategies across industries.

The future of Pega Robotics as a Service (RAAS) is poised for remarkable growth and innovation. As organizations

continue to prioritize digital transformation and automation, the demand for flexible, scalable, and efficient robotic solutions will surge. Pega's RAAS model, with its emphasis on reusability, platform - agnosticism, and rapid deployment, is well - positioned to meet these evolving needs. Looking ahead, advancements in artificial intelligence, machine learning, and cloud computing will further enhance the capabilities of RAAS, enabling more intelligent and adaptive automation.

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