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# Unlocking Integration Efficiency with Entire-X

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**ABSTRACT**

EntireX stands as a robust middleware solution, pivotal in facilitating seamless integration and communication between disparate systems and platforms within an enterprise architecture. This abstract delves into the core principles and functionalities of EntireX, elucidating its significance in optimizing integration processes and enhancing operational efficiency.

At its core, EntireX serves as a comprehensive middleware platform, offering a suite of tools and services designed to streamline the integration of diverse applications, databases, and technologies. Leveraging messaging protocols such as Remote Procedure Call (RPC) and Message Queuing Telemetry Transport (MQTT), EntireX enables real-time, asynchronous communication between heterogeneous systems, irrespective of their underlying technologies or architectures.

Key features of EntireX include its robust support for various programming languages, including Natural, COBOL, Java, and .NET, facilitating seamless interoperability between legacy and modern systems. Additionally, EntireX provides extensive monitoring, management, and administration capabilities, empowering organizations to monitor and optimize integration workflows in real-time.

Moreover, EntireX embraces industry standards and protocols, ensuring compatibility with a wide range of technologies and platforms. Its support for secure communication protocols, such as SSL/TLS encryption and digital signatures, enhances data security and confidentiality, safeguarding sensitive information exchanged between systems.

Organizations across diverse sectors, including finance, healthcare, manufacturing, and telecommunications, leverage EntireX to address complex integration challenges, such as legacy modernization, data synchronization, and business process automation. By enabling seamless communication and collaboration between systems, EntireX facilitates the efficient exchange of information, accelerates decision-making processes, and enhances overall operational agility.

In conclusion, EntireX emerges as a cornerstone in modern integration architectures, offering organizations a comprehensive solution for orchestrating and optimizing communication between disparate systems and technologies. With its robust features, industry-standard compliance, and versatility, EntireX empowers organizations to unlock integration efficiency, drive digital transformation initiatives, and gain a competitive edge in today's dynamic business landscape.

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## Introduction

EntireX is a powerful middleware solution developed by Software AG, designed to facilitate seamless integration and communication between diverse systems and applications within an enterprise environment. It serves as a bridge between heterogeneous technologies, enabling efficient data exchange and collaboration across different platforms, programming languages, and architectural paradigms.

At its core, EntireX provides a comprehensive set of tools, services, and protocols that streamline integration workflows, automate data transfer processes, and enable real-time communication between disparate systems. Leveraging messaging protocols such as Remote Procedure Call (RPC), EntireX allows applications to invoke procedures and exchange data transparently across distributed environments.

One of the key strengths of EntireX lies in its support for a wide range of programming languages and technologies, including legacy systems like Natural, COBOL, as well as modern platforms such as Java and .NET. This flexibility enables organizations to seamlessly integrate legacy applications with newer systems, facilitating the modernization of legacy infrastructure while preserving existing investments.

EntireX also offers robust monitoring, management, and administration capabilities, empowering organizations to monitor the health and performance of integration processes in real-time,

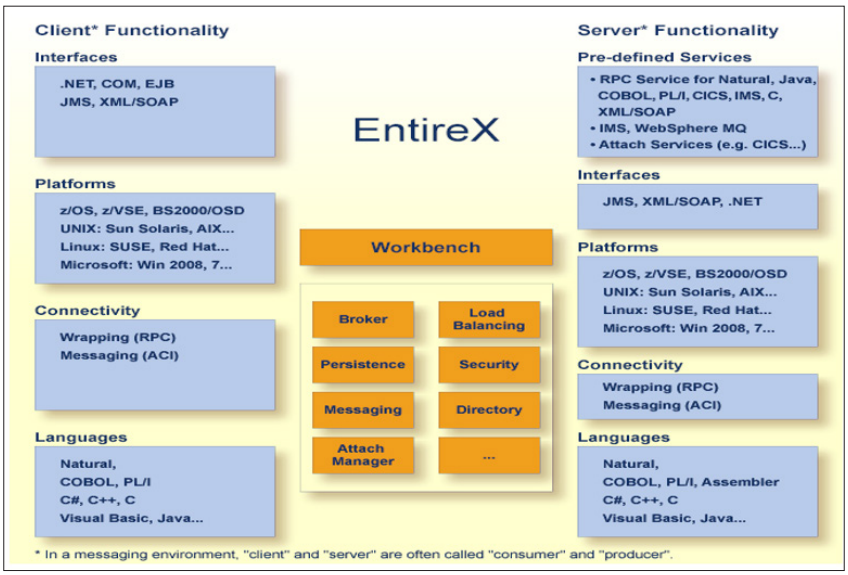
identify bottlenecks, and optimize resource utilization. Additionally, it ensures data security and confidentiality through support for secure communication protocols such as SSL/TLS encryption and digital signatures.

Organizations across various industries, including finance, healthcare, manufacturing, and telecommunications, rely on EntireX to address complex integration challenges, automate business processes, and accelerate digital transformation initiatives. By providing a unified platform for orchestrating communication between systems, EntireX enables organizations to enhance operational efficiency, improve decision-making, and adapt to evolving business requirements in today's dynamic and interconnected landscape.

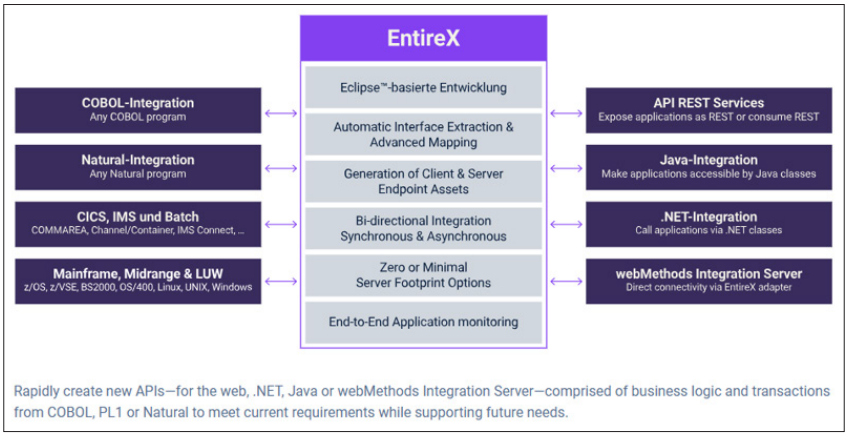
In summary, EntireX plays a crucial role in modernizing IT infrastructure, enabling organizations to seamlessly integrate diverse systems, streamline data exchange processes, and unlock new opportunities for innovation and growth. With its robust features, extensive compatibility, and proven track record, EntireX remains a trusted middleware solution for organizations striving to achieve seamless integration and collaboration across their enterprise ecosystem.

**EntireX Components**

The graphic below provides an overview of platforms and functionality supported by EntireX.




**webMethods EntireX**




Extend your legacy COBOL and Natural applications to the digital economy with APIs.

webMethods EntireX provides a cost-effective and efficient path for application modernization and API enablement-whether you need to integrate mainframe assets into process applications or elevate them to the digital economy through services.

Give new life to your core applications with webMethods EntireX. Bring the business logic that resides in COBOL, Natural, and other applications into the digital economy. You can create inventive new business processes using your established mainframe, midrange or Linux®, UNIX®, Windows® (LUW) platform applications, all without changing the underlying source code.

You can leverage programming logic and transactions from a wide variety of host environments to create new Application Programming Interfaces (APIs) for consumption by .NET® and Java® applications as well as participate in the rapidly growing digital economy via REST.

**Key Benefits**

**Leverage Existing Investment in COBOL or Natural**

- Bring the business logic that resides in COBOL, Natural, and other applications into the digital economy. You can create inventive new business processes using your established mainframe, midrange or Linux®, UNIX®, Windows® (LUW) platform applications, all without changing the underlying source code.

**Connect Core Applications with APIs**

- Creating high-performing, secure APIs with just a few clicks is the fast path to application modernization. Easily connect core applications with Java®, .NET®, web services or REST APIs with seamless, built-in integration between EntireX and webMethods Integration Server.

**Deliver New Products to Market Faster**

- Trigger inventive new business processes using your established mainframe applications. By reusing what works in new ways, you can offer new services and products to market on the web or cloud without the heavy lift of re-invention.

**Lower Costs**

- Reduce costs by easily leveraging existing business functionality to meet new business needs. By exposing your existing business logic without changing any code, API enablement accelerates legacy system integration while driving down the cost of digitalization. In addition, enjoy the freedom to choose architecture options that have zero or minimal mainframe footprint.

**Key Features**

**COBOL Integration**

- Quickly integrate modern applications with any type of COBOL program. Proven at hundreds of large enterprises, EntireX can integrate a wide variety of COBOL development patterns with ease. Take multiple output handling as an example. By integrating the interfaces with easy-to-use mappings, your programmer does not have to change underlying source code.

**Natural Integration**

- Leverage tight integration with Natural and NaturalONE. Wizards within the Eclipse™-based design-time environment let you create your integration scenarios quickly and easily across the Software AG product stack.

**Automatic Interface Extraction & Advanced Mapping**

- Today, programming is different. Fortunately, EntireX automatically maps legacy-language functions to modern programming languages without interfering with the back-end program. For example, EntireX can suppress fields so they don't show up in the modern user interface but still operate as invisible input back to the mainframe.

**API REST Services**

- APIs are driving the digital economy. Whether or not you reach out for APIs, you can be sure APIs will reach out to you. Let your COBOL and Natural assets participate in the fast-growing digital economy by creating REST APIs with just a few clicks.

**Faster Services**

- EntireX wraps existing applications so that they can be accessed as services, with your choice of interface—XML/SOAP, DCOM, Java, and others. Once the service is defined, it can be used in any application. This lets you quickly create new business processes from your established mainframe applications.

**Unified with webMethods Integration Server**

- Easily connect core applications with Java®, NET®, web services or REST APIs with seamless, built-in integration between webMethods EntireX and webMethods Integration Server.

**Multiple Communication Models**

- EntireX offers you a choice of appropriate communication models: asynchronous fire & forget (reliable RPC), synchronous request-reply (RPC) and conversational RPC. This helps you meet all demands using a single product.

**Bi-Directional**

- Trigger events from your established mainframe and LUW environments. Quickly expose core application business logic. EntireX supports all common scenarios in both directions, inbound as well as outbound. Either endpoint can send messages symmetrically—so you can start messages from either end.

**Zero or Minimal Server Footprint**

- Reduce CPU consumption and save costs by selecting EntireX options with minimal to zero footprint on the mainframe. Beneficial to organizations that have split or outsourced mainframe computer centers, low footprint options with EntireX can help you turn around changes faster and deal with less ticketing, saving costs.

**Security and Reliability**

- Clustering technology delivers high availability, so you can operate with minimal downtime, improve performance, and deliver a better user experience. Bring your server's existing authorization rules, such as RACF or ACF2 under z/OS, to the desktop without introducing any new APIs [1-4].

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