EnterpriseWeb™: Reinventing the Application Layer for the Real-time Business

Overview

Modern companies must operate in an increasingly dynamic and integrated business environment. All too often, however, their operational systems simply cannot handle the agility demands put upon them.

Messaging, then Service Oriented Architecture (SOA) and, most recently, data integration were supposed to bring everything together; however, the accelerating complexities of enterprise IT ecosystems always seem to be one step ahead of the capabilities of each new integration methodology. Worse still, it looks as though we as an industry are perpetuating these inflexible architectures as the industry moves to the Cloud.

HIGHLIGHTS

Vendor name: EnterpriseWeb™

Product function: Intelligent enterprise operations and real-time integration platform

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Availability: Currently available

Modern businesses depend on a complex array of specialized infrastructure systems to deliver applications. These applications represent models of standardized transactions the business requires and are intended to help automate business processes. In other words, they are the modern "tools of the trade" supporting employees in their interactions with customers, partners, team members, and managers.

All too often, however, the technology ecosystem supporting these business-critical interactions is brittle, failure-prone, and difficult to connect. Furthermore, each change to these environments is a risk-prone process that is expensive, time-consuming, and often disruptive to "business as usual." And while there are many vendors delivering service management and API management products, the use of services and APIs can simply extend the breadth of "brittle" composite applications and processes to new platforms such as Cloud.

EnterpriseWeb offers an innovative alternative, designed to introduce flexibility into brittle IT systems. This very fast, extremely scalable Platform-as-a-Service / Software-as-a-Service is a "software defined" alternative to hard-coded, hard-wired enterprise applications. *In the EnterpriseWeb model policies, versus middleware, construct applications "on the fly."*

This ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) product brief describes a dramatically different approach to providing a flexible foundation for a true "real-time" business.

Real-Time Semantic Enterprise Application Integration

EnterpriseWeb represents a re-think of application architecture to account for a new technological age. It offers a fresh "systems-view", which helps organizations bring order to distributed and diverse application resources and improve both the user-experience and IT productivity.

The platform addresses fundamental problems plaguing IT, such as security, cross-process business interoperability, personalization/compliance, version control, and component re-use. It does so via an extensible library of shared services that provide consistent tools and controls for all layers of enterprise architecture.

The role of the EnterpriseWeb Intelligent Operations Platform is to re-introduce agility and flexibility into enterprise entities, policies, and interrelationships – and consequently into application architectures as well. It provides a real-time, top-down, single-pane, "intelligent" cross-enterprise view, along with

centralized policy management. This supports integrated operations between, across, and beyond organizational boundaries.

The platform also synchronizes events, automatically "discovers" changes, and incorporates them into its models of applications and processes. This enables companies to absorb constantly changing business requirements without resorting to disruptive (and often inaccurate) manual change management processes.

How It Works

EnterpriseWeb combines a "living" enterprise model, integrations based on enterprise policies, and real-time access to both data and functions in a single platform. It semantically personalizes and governs interactions in real-time. Because of its underlying architecture, it functions at a speed and scale that support even the most complex enterprise environments.

The platform is composed of a logical layer overlaying and intelligently integrating existing entities and systems. In essence, the organization becomes a "web" of linked and indexed application resources. Incorporating semantic data-driven integration functions, the storage and access capabilities of a SQL database, data modeling, and policy management, the system itself is capable of selecting the "right" target for runtime applications. This enables Development teams to realize the promise of true "find and bind."

Another unique feature is the fact that the system is self-maintaining; all updates are indexed as they happen and are propagated to a shared "state-space" available to all related entities in the meta-model. As a true data-driven environment, this can trigger any related monitors, causing a ripple effect through the system.

Conceptually, this is somewhat similar to an update to a cell in a spreadsheet—all related cells are automatically updated, maintaining a singular authoritative data source. While EnterpriseWeb performs in much the same way, it also stores the history of all updates, such as record changes, modifications to models, and code revisions. This "universal lifecycle management" function is another distinctive feature of the platform.

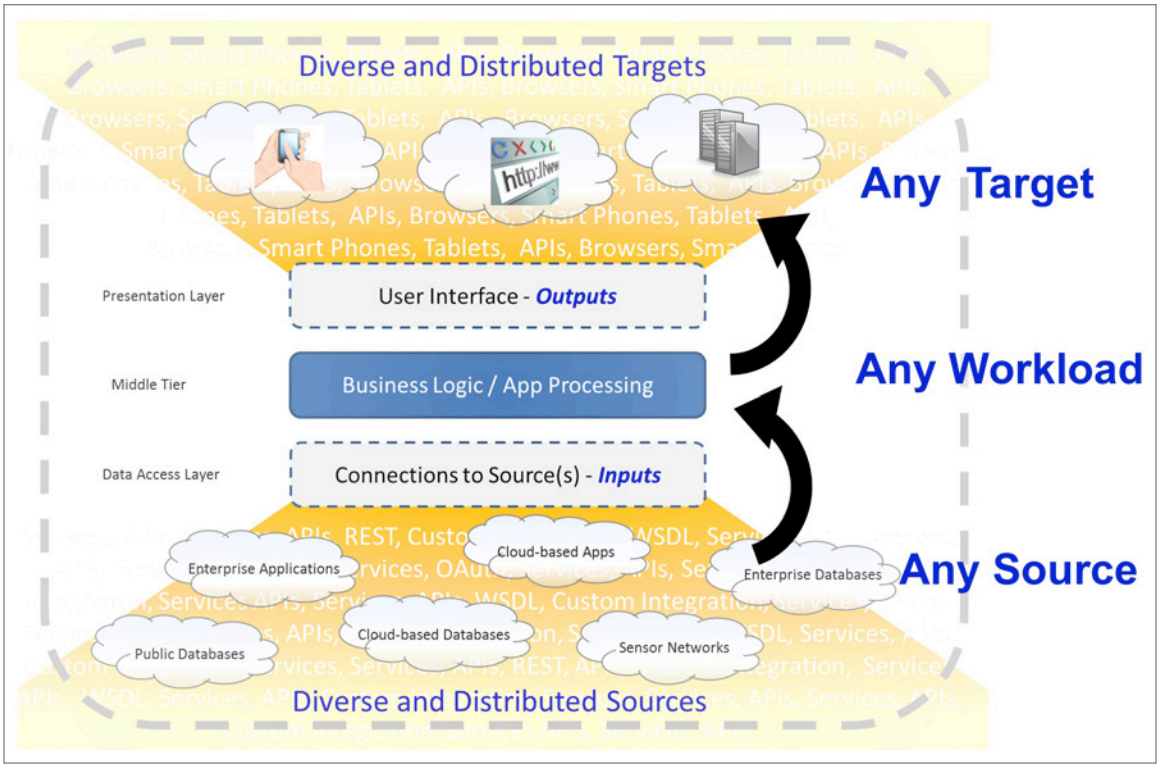

Figure 1: EnterpriseWeb Intelligent Operations Platform

Implementation Process

As Figure 1 shows, EnterpriseWeb acts as an intermediary layer that federates access to virtually any enterprise system of record. As a data-driven service, it can integrate to existing access control systems such as LDAP, DNS, and Active Directory, as well as with enterprise applications such as payroll and Enterprise Resource Planning (ERP) systems.

The typical installation begins with the creation of an organizational model from multiple sources, including access control systems, Human Resources (HR) applications, etc. This initial step is followed by the development of processes and policies. Once the basic elements of the platform are in place, policy-driven agents installed on application servers monitor interactions and self-curate all metadata.

From the enterprise management perspective, as applications execute the platform "sees" performance and availability at each step in a transaction. This provides real-time insight into performance and availability, as well as a trace of every interaction – including a record of each resource the system calls. At the same time, it applies compliance, integrations with IT Service Management (ITSM) lifecycles, security control, data retention, and indexing to every interaction.

Key Benefits and Differentiators

- **Policy-driven integration delivers loose coupling and fine-grained resource control:** In contrast to traditional Enterprise Service Bus (ESB) and middleware systems with largely static integrations, EnterpriseWeb is driven entirely by RESTful, loosely-coupled integrations. Application components can be linked at the semantic layer, introducing complete visibility into component interactions.
- **Dynamically links "top down" and "bottom up" visibility to enterprise services into a virtual resource pool:** The EnterpriseWeb platform starts at the top layer of the enterprise ecosystem with a model of the organization including people, roles, and security. It then auto-discovers subsequent layers. This provides visibility from users down to actual application resources, without the need for heavyweight transaction tracing or dependency mapping software.
- **"Pluggable resources" supporting dynamic integration:** EnterpriseWeb uses application abstraction to make each integration into an interoperability point. Each resource is wrapped with its own policies which, in turn, automatically inherit access control and security rights from the enterprise model.
- **Dynamic change modeling for "universal lifecycle management":** Changes to the underlying "real" application ecosystem are automatically version-controlled and reflected in the EnterpriseWeb platform.
- **Policy-driven data and application governance:** Fine-grained resource control (by group or individual policies) is built into the system, with all interactions controlled and governed by an organization's unique policies. Object-level security governs user access to specific applications and data.
- **Scalable Cloud:** With a deep "understanding" of policies, security, and entities within the execution environment, EnterpriseWeb can make autonomous decisions regarding intelligent placement of application workloads. From this perspective, the platform is ideally positioned to deliver applications over scalable, virtualized Cloud systems.
- **Dynamic linking at production speeds:** The platform supports high-speed computation of diverse workloads across data and code.
- **Monitoring integrated into the platform:** Because the platform "sees" each interaction, green light/red light monitoring and troubleshooting are built into the platform.

EMA Perspective

EnterpriseWeb is a privately-funded startup which has developed an integration platform supporting the original promise of SOA – which was to "find and bind in real-time." The EnterpriseWeb Platform encompasses the functionality of both a Business Process Management (BPM) system and an Enterprise Integration Platform, but with some key differences. Unlike the traditional BPM system, this isn't a stand-alone silo solution supporting process management alone. And unlike traditional ESBs or other integration assets, integrations are policy-driven versus hard-coded.

The problem with such an approach doesn't lie as much in the product itself as in its innovative nature. It isn't easy to classify this product into an existing bucket, as EnterpriseWeb is forging a new trail in the forest of well-known integration vendors such as Informatica, IBM, and Oracle. As BPM vendors add integration capabilities to their products and as integration vendors increasingly add support for business processes, competition will continue to intensify.

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Probably the best way to grasp this value proposition is to examine the types of companies that are gravitating to EnterpriseWeb. Banks, telecoms, and healthcare firms are all confronting significant challenges to integrate and modernize massive, diverse, and in some cases antiquated technology ecosystems. In these same companies, integration alone is not enough; the integrated systems must become high-speed execution environments that also support ongoing change as enterprise assets are added and modified.

EnterpriseWeb's functionality is designed to solve these challenges. In doing so the company is blazing an innovative trail of its own. Its answer is to make applications completely virtual, and all indications are that it is succeeding.

This is a disruptive, early-generation product, and prospects are advised to take advantage of low-cost Proofs of Concept (POCs) to ensure that EnterpriseWeb meets their needs. That being said, companies challenged to bring hard-wired, brittle production systems into today's Cloudy and virtualized world are encouraged to contact EnterpriseWeb to find out more.