

Tomorrow's Platform Today: The Integration Of Everything

Organizations that adopt a next-generation platform won't need to ask questions such as: Should I go for Open Source, Java, IBM or Oracle? They can get into disruption mode using the technology that fits their needs best



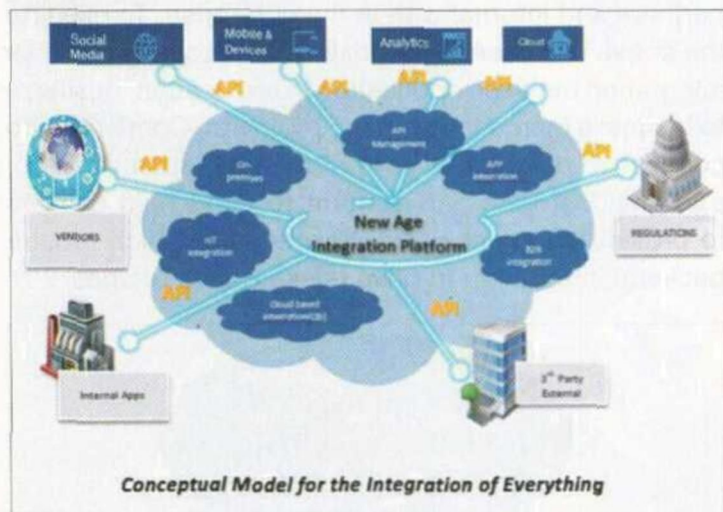
Technology integration has always been a challenge. Integrating legacy infrastructure with new technology, integrating cloud environments with on premise and integrating system of records with customer-facing systems of experience are sucking up an alarming amount of resources, time and costs. More importantly, traditional integration methodologies like Common Object Request Broker Architecture (CORBA), Enterprise Application

Integration (EAI) and the more recent Enterprise Service Bus (ESB) are unable to keep pace with the high-volume transformation made necessary by disruptive business models.

Integration is slated to present even greater challenges. There is the coming growth in the Internet of Things (IoT) to contend with as well as the increasing adoption of lightweight, loosely coupled Microservices architecture as a path to agility.

The solution seems obvious: a one-stop shop for the integration of everything that businesses can use to keep their operations, license and management costs under control.

For such a platform to become successful, we need two critical capabilities: first, while speeding up integration, the platform shouldn't disturb the current architecture, and second, ensuring the business model is consumption- or outcome- based. In other words, what is called for is an As-a-Service New Age Integration Platform



The challenges posed by these platforms become evident when considering the privacy and compliance requirements of industries such as financial services. Moving base storage, applications and compute capabilities to cloud and integrating them with on premise compliance-sensitive services can be tricky. However, enriching customer experience and accelerating time to market for new products and services depends on rapid and flawless integration between core processes, business partners, regulatory bodies and end customers.

The advantages of such platforms are amplified when considering a supply chain scenario in manufacturing. As Manufacturing 4.0 and Smart Factories become the norm, businesses will need to connect and integrate with many different internal and external systems. This will become the default mode of operations as manufacturing supply chains begin to leverage data from diverse sources and self-optimize for demand management, cost efficiencies and quality improvements.

KEY FOCUS AREAS

The technology and solution architecture for such the

New Age Integration Platform would focus around:

API Management: APIs enable the integration of light weight Microservices, quickly ensuring that two independent services can interact. This allows enterprises to move away from traditional, inflexible monolithic architecture and respond to customer needs with speed and agility. The trend is giving rise to popular API management products from vendors that provide end-to-end API life cycle management, API gateway, Microservices development, DevOps and Deployment (On premise/Cloud/PCF) capabilities.

IoT: API management products integrate IoT systems. Capabilities such as API security, versioning and analytics are leveraged to support M2M integration and device integration with cloud to improve customer experience, new services and improved revenue. As new devices become participants in the IoT, new protocols will evolve, and integration technology will have to become dynamic. According to Gartner, half the cost of implementing IoT solutions in 2018 will be accounted by integration efforts between IoT components and backend systems.

System of Records: Aligning to API First architecture, backend APIs will be pressed into service to abstract data from Systems of Record and power frontend Systems of Experience and Systems of Interaction. Systems of Records are typically slow moving, unaccustomed to the fast-pace of frontend apps, websites, mobile and social interaction. The clock speeds of front and backend systems are so different that APIs must be used to provide the high-volume real-time services that front ends demand when they scale from thousands to billions of interactions.

Cloud Integration: It has become essential to integrate cloud to cloud, on premise to cloud, hybrid and device to cloud, so that applications and data can be accessed by anyone, anywhere and anytime, driving convenience, speed and customer satisfaction. Integration Platform as a Service (iPaaS) provides the necessary tools for cloud application and service integration. Clearly, cloud integration is an area that demands a watchful eye and careful monitoring.

Backend as a Service (BaaS): App development involves considerable time and effort in backend data integration. Many backend services such as social graphs, user management, data storage, push notification and performance monitoring, each with its own API, can be exposed to applications. For developers, this can be tedious and time-consuming. BaaS connects the back and frontend of an app using

a unified API, providing a consistent way to manage data and eliminating the burden on developers while accelerating development.

Files Integration: B2B interaction and transactions – between suppliers, distributors, employees and third party logistic providers – is through an exchange of files. This is done using Electronic Data Interchange (EDI) or Managed File Transfer (MFT). The market offers several ready-to-use MFTaaS solutions in a variety of business models.

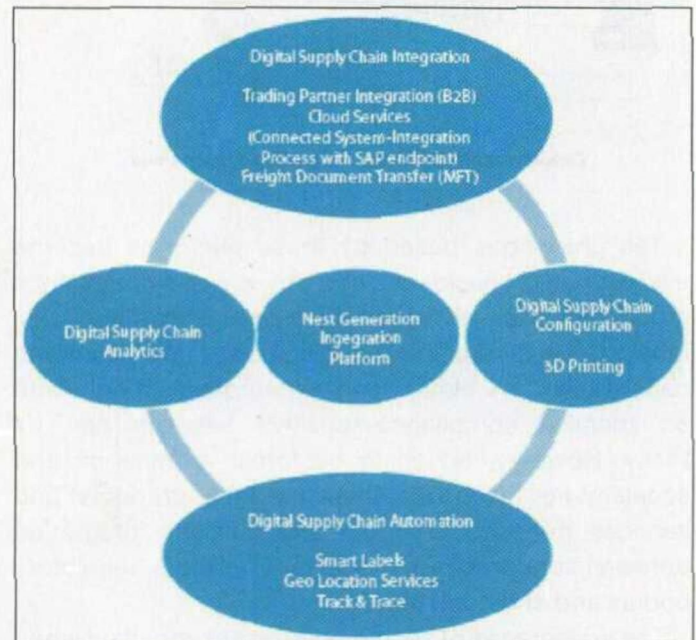
Social Media: Many businesses are opting for social media (SM) integration to understand what end users want, enable rich and instant interaction with end users and upgrade products and services based on the feedback of the customer. SM is making its way into every segment of business, from product design and testing to marketing, customer service, feedback, insights on competitive products and even employee engagement. Integration with Facebook, Twitter, LinkedIn, Instagram, Pinterest and other SM platforms is API-driven and offers limitless prospects of identifying business opportunities in social conversations.

How Next Generation Integration platform can benefit industry verticals?

Welcome to Manufacturing 4.0 – Digital Supply Chain. Manufacturing industry has gone through a rapid transformation of their manufacturing processes from Industry 3.0 (adoption of IT, Electronics & automation of production processes) to Industry 4.0 (an example is the digitization of manufacturing & supply chain processes). Adoption of Next Generation Integration Technology can digitize the supply chain processes. To enable this, we need a seamless connectivity between the system of engagement and system of records, automated transfer of documents (Invoicing & Purchase Order), capturing the status of each supply chain activity in the supply chain process, need to pull in data from different system of records (Order management system such as

“ Security and regulatory compliance becomes utmost important to banks when it comes to ‘Open Banking’ adoption ”

SAP), third party system (EDI system such as Sterling Integrator), secured file transfers (Confidential Product Design Document) to 3D printers, Smart labeling to track the product movement within the supply chain. API Layer will enable the integration and connectivity between the applications within and outside the enterprise. Managed File Transfer will provide the secured document transfer between the trading partners and internal with in the enterprise. To execute the above use case, enterprise would require seamless integration between application to application, business to business (across the trading partners), Connectors to connect to different system of records (such as SAP), publishing of data and content to hand held devices to provide an enriched user experience which require backend integration to push relevant data to apps.



The Next Generation Integration Platform with API Management, File Transfer, B2B Integration & Backend Integration enabled thru Backend as a Service(BaaS) capability, social media integration (capability through APIs which will provide valuable insights on what competition is saying on their products, customer feedback on products) will enable customers to quickly adopt to digital disruptive business model

BANKING INDUSTRY - OPEN BANKING

Open Banking is the self-service discovery, provisioning and creation of new services by ecosystem inside and

