Why Hybrid Integration Provides the Best of Two Worlds

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What Is Hybrid Integration?

"By 2022, at least 65% of large and global organizations will have implemented a hybrid integration platform." **Gartner[1]**

Hybrid integration is the combination of both cloud and on premises solutions – often from multiple providers. Hybrid integrations offer variety, so companies can pick and choose which aspects of their business are better off on-premises and which are better in the cloud.

While many companies are enticed by cloud-based systems, some are trying them on a smaller scale before moving over their entire business.

In a post-acquisition environment often the parent company's systems isn't the best-fit for the subsidiaries. Companies often decide to keep both systems running with a primary one running at headquarters, usually an on-premises system, and an additional cloud system at the subsidiaries.

However, having multiple cloud computing models mixed with on-premises solutions creates confusion as to where integration should reside. For example, it's possible for one company to run JD Edwards on Oracle private cloud, SAP ECC HANA in the private cloud and a separate Salesforce.com SaaS application in a public cloud that integrates to both ERP environments.

"The need for hybrid computing is driven by demand as organizations support diverse cloud, edge, and on-premises locations to deploy their digital assets and application while benefiting from the flexibility to decrease costs and to increase choice." **IDC[2]**

The challenges are finding ways to manage all the different data flows no matter where they reside. Finding the most painless path to integration means having an integration platform that is fully interoperable and not locked-in to one environment or architecture and that is able to handle all of the different data types and computing environments.

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[1] Gartner, Inc., How to Implement a Truly Hybrid Integration Platform by Massimo Pezzini and Elizabeth Golluscio, February 16, 2018, https://www.gartner.com/document/3858363
[2] IDC, The Urgent Need for Hybrid Integration by Stewart Bond and Maureen Fleming, July 2017

This is important since the "best" deployment model for today might not be the best model in a few years, or even a few months. Integration platforms can provide the flexibility to maintain integration as requirements evolve.

Hybrid integration can provide enterprises with the best of both worlds with the option to shift resources back and forth as business needs evolve.

Why Invest in an Integration Platform?

"As more applications and data move to the cloud, application leaders face increasingly complex integration requirements: within the same cloud, across different clouds and with on-premises endpoints. Supporting these diverse topologies in your hybrid integration platform strategy has become crucial." **Gartner**[3]

Integration platforms deliver the agility companies need to provide one unified platform to manage data and business process complexity for today and tomorrow's cloud computing needs.

An integration platform can be the glue that holds applications together and the plumbing that facilitates the free flow of data. For example, middleware can enable data from a Salesforce CRM system to be translated into a format that an Oracle ERP system can use. However, enabling the exchange of data between systems is not enough. In order to make hybrid integration solutions efficient and effective, middleware platforms need to have the following capabilities built-in:

Support for Big Data: Support for Big Data is needed to manage the huge volumes of data generated, stored and shared in various systems including ERP, CRM, eCommerce and more. With an In-Memory Data Grid architecture, if a node fails, the management system shifts the processing to a different node, thereby preventing any data loss. When traffic peaks and processing requirements increase, the management system automatically recruits more nodes, adding scale elastically when it's needed.

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[3] Gartner, Inc., How to Architect a Multicloud-Capable Hybrid Integration Platform by Massimo Pezzini and Elizabeth Golluscio, May 3, 2018, https://www.gartner.com/document/3873644

Cloud Friendly: Cloud friendly is essential since today's business systems use a variety of cloud-based systems, which are often procured on short-term contracts and frequently switched from one supplier to another. An application integration platform should be able to handle multiple cloud architectures and to manage data in this highly dynamic environment.

Device Agnostic: Device agnostic allows developers to create a native application from a single source that can present the data in the most natural way based on the user's device. This can be accomplished by taking the output of the integration flow, and then processing it through a presentation layer, which can change the look and feel of the application depending on whether it is a smartphone, tablet, or PC.

Secure connections: Secure connections in a predictable manner to other databases, frameworks, applications and endpoints are necessary. Certified integration connectors are advisable meaning that that system has been approved and validated by the vendor. In many cases, using an approved integration solution means that your maintenance and support agreements with the vendor will be honored. Using non-vendor-approved integration solutions could leave you without support in case you experience difficulties and the vendor blames the systems integrator.

Better Together: Business Benefits of Integration

Integration is critical to getting the most value and maximizing ROI from your IT systems. Business benefits of integration include:

Increased Productivity: With hybrid integration you are able to leverage your existing investments while at the same time adopt the newest technologies. In addition, by automating workflows and sharing data between systems, employees spend less time switching between systems, manually entering duplicate data, contacting others searching for information, and avoid the need to learn a whole new application, giving them more time to focus on their key objectives.

Increased Revenues/Profitability: Waiting for systems to be updated manually can lead to lost opportunities due to inaccurate information. More opportunities can turn into signed deals when information about the customer and product availability are accessible and up-to-date. By integrating systems and offering self-service opportunities, you make it easy for customers and partners to do business with you, increasing revenue opportunities. Integrating systems also reduces man-hours spent collecting data, transferring data between systems and fixing poorly entered data, making your business more profitable.

Enterprise Mobility: Many integration projects are the result of the increasing need to provide seamless and secure mobile access to corporate information anywhere, anytime. Integration solutions let you mobilize and connect backend business processes the way you want to create the most useful and valuable mobile enterprise apps for your business.

A Bigger Picture for Improved Decision Making: Integration allows IT to provide executives with dashboards that present the real-time state of the business with key business indicators across applications. Access to comprehensive real-time data lets management make better-informed decisions.

Increased Satisfaction: Automating businesses processes and data across systems can provide a 360 degree view of the customer and eliminate the need for redundant, mundane error-prone tasks. The fewer steps, interactions and errors it takes to accomplish a mission, the happier you'll make your customers, partners and employees. In addition, with all information readily at hand, customer-facing staff can provide fast, accurate responses to customer queries and an improved level of service that encourages customer loyalty, repeat purchases and up-sales. Employees are happier when they can spend their time on more rewarding (financially and otherwise) responsibilities.

Key Requirements for an Integration Solution

"Through 2020, integration work will account for 50% of the time and cost of building a digital platform." **Gartner**[4]

With integration driving the next wave of business productivity improvements through digital transformation, chances are you are going to have multiple integration projects to undertake, not to mention changes to implement as systems get upgraded, business processes change, new products and partners are added, and new business models are tried.

There is no doubt about it. Competition is getting tougher. The ability to run a lean, agile and innovative enterprise is a key success factor. The forces of enterprise mobility, social networks, cloud computing and big data analytics are putting new demands on your business and also on your integration solution.

You've chosen your enterprise applications to help answer strategic business needs for improved efficiency and competitiveness; so shouldn't you think the same way about your integration solution?

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[4] Gartner, Inc., How to Implement a Truly Hybrid Integration Platform by Massimo Pezzini and Elizabeth Golluscio, February 16, 2018, https://www.gartner.com/document/3858363

To be a long-term solution and provide the best return on investment (ROI), your integration solution must be able to handle current and upcoming challenges, including:

Support for a Wide Variety of System Environments and Applications

Due to mergers, acquisitions, changes in the vendor marketplace and various business decisions over the course of time, enterprises frequently have many different back-end systems, often running on different operating systems, using different databases and languages. They might even run multiple versions of applications from the same vendor. Some of these applications reside on-premises, while increasing numbers are cloud/SaaS-based solutions. And businesses increasingly have to integrate with a dynamic variety of trading partners and other companies and services outside of their enterprise as well.

You are already managing a complex enough IT environment; make sure your integration solutions doesn't make it more complex.

One solution that can integrate a wide variety of applications, databases, technologies and standards, makes a great deal of sense. Your solution should also be able to integrate cloud and on-premises applications, and perhaps even let you run your integration in the cloud.

And doesn't it make even more sense if multiple diverse integration requirements can be accomplished using the same skill set? Why employ specialists in many different applications, languages and technologies when your integration tool can do the detailed connectivity work behind the scenes and let your developers concentrate on connecting the right data and workflows?

Support for Process-based Integration

Traditional ETL tools only move data. Process-based integration allows you to follow the business logic that your users already use when updating information across systems, turning your existing ad- hoc and informal processes into automated, robust ones.

For instance, if you speak to a sales lead through a social channel, you need a lead record to be created and updated in CRM as the conversation progresses, then passed through to your ERP when time to perform a credit check, back to CRM to close the sale and back into the ERP for order fulfillment and invoicing. Without an integration solution, you risk losing data, incomplete/incorrect data entry and having different information in different systems. Not only does manual data entry take time, it also takes time to keep all other stakeholders in the process informed, or your business may suffer the consequences of not doing so. Business process automation not only will keep your data updated in both systems, it allows you to automate workflows across systems, so your business operates most efficiently.

Mobilization of Business Processes

Many integration projects result from the need for mobile apps.

> *"Integration is often the largest part of the effort of delivering an enterprise mobile app, with many app development teams underestimating the time and resources required for integration."* **Gartner**[5]

With this type of significance, an integration solution that provides an easy method of mobilizing business processes on a wide variety of mobile devices with a single development effort can provide a big advantage.

Your enterprise mobile apps may require combined business processes from CRM and other systems. While modern CRM systems often provide a mobile offering, in most cases, it is neither flexible enough nor cost effective for the majority of mobile apps that will be needed. Businesses should consider integration solutions that offer easy and cost-effective mobilization using the same technology stack.

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[5] Gartner, Inc. The Key Fundamentals Required to Scale Mobile App Development by Adrian Leow, February 3, 2017, https://www.gartner.com/document/3587262

Scalability and High Availability

The forces of mobile, social, cloud and information are putting greater demands on integration solutions to handle unprecedented numbers of transactions. For example, eBay announced that $9.5 billion of their sales in Q2 of 2016 came from mobile, which added up to 45% of their Gross Merchandise Value.[6]

While mobile might not bring these kinds of numbers to your business, your integration solution should be able to perform optimally and scale easily without breaking your bank.

You may need to sleep, but your business needs to keep operating 24/7. You need to make sure your employees, business partners and customers can keep functioning, regardless of where in the world they are located and what time they choose to work. You cannot afford downtime.

An integration solution using In-Memory Data Grid (IMDG) technology enables you to comfortably support increasing volumes of transactions. IMDGs distribute the workload across multiple machines, which work together to handle the processing. Data and business logic are replicated throughout the grid, so more machines can be seamlessly added to deal with peak traffic. This distributed architecture is also fault- tolerant, clustering capabilities enable automatic data recovery without stopping operations.

Real-Time Data Availability

Business Intelligence has sometimes gotten a bad rap because the information provided was based on outdated data. If you want true business intelligence, you need information based on data that is as close to real-time as possible. While issues of data verification can make literal real-time a moot point; your integration solution should be able to capture and route relevant business process data and objects in as near real-time as possible to enable monitoring of processes and to provide management with clear dashboards of relevant data on which they can rely to make business decisions.

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[6] eBay Inc., Q2 2016 Company Fast Facts

Highly Productive & Reliable

The faster the time to deployment, the sooner your business can benefit from its integration projects. An easy-to-use, code-free integration solution with a graphical user interface that visualizes mapping and flows, not only speeds the integration, but also makes it easy to assure alignment between technical and business users.

Reliability can be assured by using optimized adapters that have been certified by system vendors and a large library of off-the-shelf protocol connectors and certified and optimized adapters for other leading IT systems.

You don't want your integration to be obsolete with the first change request or upgrade to one of the systems; thus point-to-point system integrations are not a good long-term solution. You need an integration solution where business processes can be easily maintained through system upgrades and changes made to vendor APIs.

You also need to know that your integration solution is there for the long run. That it has the capacity to grow with you as your business expands and that it will be able to meet the performance expectations of your customers and partners for the foreseeable future, including the ability to integrate on-premises and cloud systems.

Customer Support and Professional Services

Integration by its very nature is not something that your organization undertakes in isolation. Integration takes a lot of collaboration, both internally and externally. You need to make sure that you are not only getting a good technical solution, but that the vendor has an excellent history of customer support with experience in integration and that there is an ecosystem of professional service providers to help you consult and execute.

Conclusion

By integrating your legacy, on-premises systems with your SaaS systems and even extending it to mobile, not only can you take your systems further, you can take your business further by providing a more complete view of your business, increasing efficiency, improving forecasting and decision-making with real- time business intelligence, and enabling new innovative applications.

About Magic xpi Integration Platform
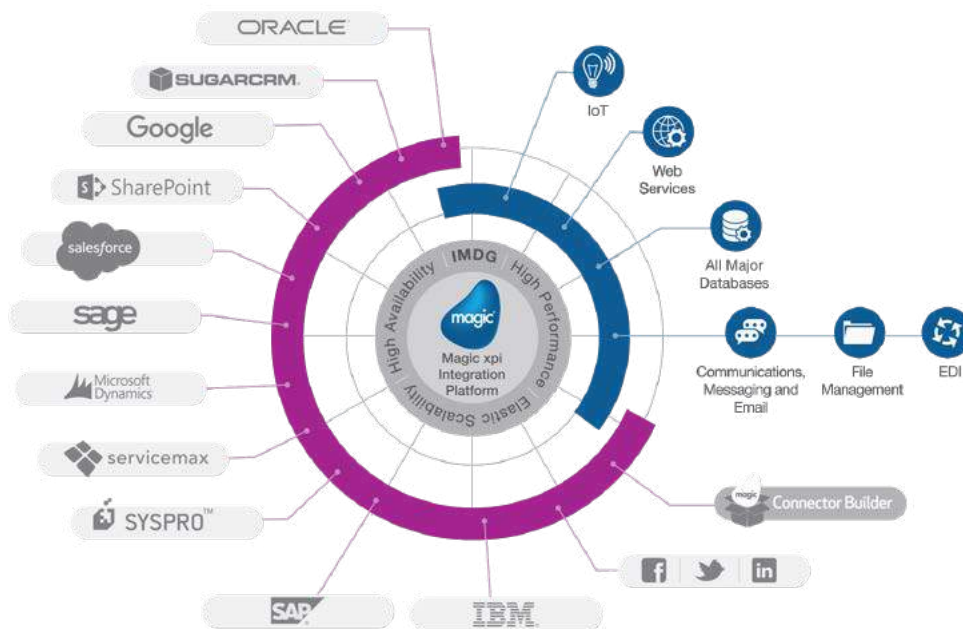
Magic xpi Integration Platform provides an enterprise-grade code-free, metadata-based approach to integration, letting IT and business users easily automate and streamline business processes between different applications and databases without programming or complex middleware.

Using Magic xpi Integration Platform, you can create real-time workflows, triggered by actions within SAP or other business applications, to ensure that employees and management always have an accurate 360° view of business information. Magic xpi also enables you to design and implement new workflows and integration processes, such as website integration, inter-company trade, data synchronization, and more.

Magic xpi Benefits

Ease of Use & Fast Time-to-Market: 5 to 10 times faster than other solutions. Our highly productive, code-free, metadata-based drag and drop paradigm lets IT and business users focus on integrating business processes, not the underlying technologies.

Any Application/Any Technology: Large set of certified and native adapters for optimized integration with leading IT systems. Over 100 technology adapters for integrating a wide variety of operating systems, databases, and standards including Web services, messaging, FTP and directories, .NET, Java, RPG, HTTP, and more. Supports Windows, Linux, AIX, IBM i Series and Solaris. Connects any combination of on-premise and cloud systems. Magic xpi can be deployed in the cloud as well.

Optimized IT Skills and Resources: Easy to implement, run and maintain. No need for deep programming knowledge. One skill set for multiple integration needs.

Future-Proof: Versatile solution with highly scalable In-Memory Data Grid architecture to support current and future cloud, mobile and big data integration scenarios. Continuous enhancements and additional application adapters.

Low Total Cost of Ownership: Built-in robustness, high availability, elastic scalability and extended management capabilities – eliminates need for extra IT resources. Useful for multiple integration scenarios.

Over 30 Years of Enterprise Application Development and Integration Experience: There's no substitute for experience. Together with our global operations and references, network of partners, and professional services, Magic has what it takes for IT to deliver successful integration projects, quickly and cost-effectively.

Enterprise-Grade: Secure connectivity using native and standard protocols. In-Memory Data Grid Architecture with built-in clustering, failover and automatic recovery capabilities assures business continuity; SOA-compliant; Comprehensive management and monitoring capabilities.

About Magic Software Enterprises

Magic Software Enterprises (NASDAQ: MGIC) provides powerful and versatile enterprise-grade application and data integration solutions. We draw on over 30 years of experience, millions of installations worldwide, and strategic alliances with global mobile and IT leaders, to enable our customers to seamlessly adopt new technologies and maximize business opportunities.

With a presence in more than 50 countries, we collaborate closely with our customers and thousands of business partners to accelerate their digital transformation.

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