



ADEPTIA

WHITEPAPER

ZERO-CODE INTEGRATION

Empower Business Users with
**SELF-SERVICE TO FREE UP
IT RESOURCES AND
INCREASE PRODUCTIVITY**

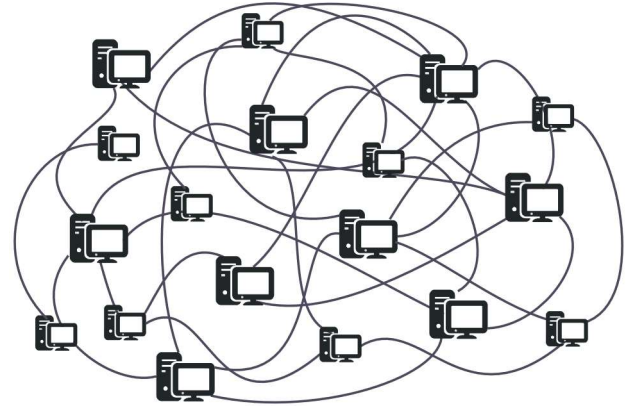
Introduction

The enterprise technology landscape is taking new forms and one of its unintended consequence is IT complexity. When technologies remain in a constant flux, their usability is often left behind.

IT complexity is something that didn't even exist 15 or 20 years ago. Back then, enterprises were having 3 to 4 enterprise systems which need to be connected with 5 to 10 external partners for data exchange. Few integrations were needed as number of key applications and major partners were limited. IT staff used developer tools to create point to point interfaces and they took months to create each one.

However, in the present scenario, technological innovations are not just changing how IT works, but also driving a shift in integration needs. There is a separate business system for every different business function. Also, there are cloud-based applications like Workday, Salesforce, BOX, etc., that are changing business operations in ways we have never seen before.

That's why, it's not uncommon to see more than 15-20 applications in each company and they have hundreds or thousands of B2B customers and partners. A lot of integrations are needed between applications and external partners. Enterprise IT remains in a state of volatility as new partners or applications are frequently added or removed. Old approach of using developer tools is not feasible and a modern, easier, simpler approach to integration is needed.



As enterprises deploy more technologies to support their business, they automatically create 'islands of automation,' adding an extra layer of complexity. These systems don't scale as per business needs and prevent organizations from getting significant return on investment. It is unwise to remove previously deployed legacy systems as many of them are still required to meet business functions.

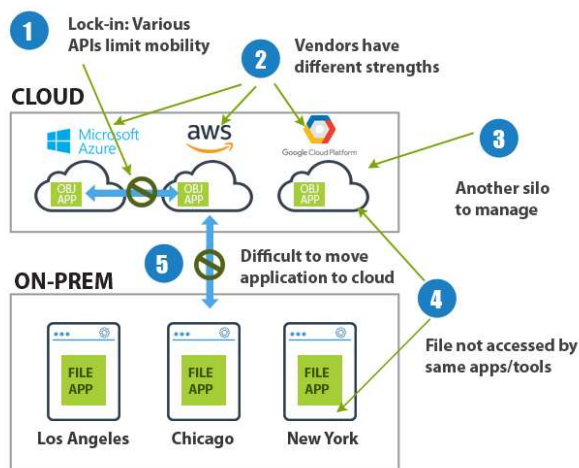
To integrate new & old technologies and eliminate independent 'islands of automation,' enterprises hire professional programmers. They use point-to-point coding and other costly homegrown solutions to establish connectivity between applications, services, and processes. This old approach does not scale and it does not solve the real purpose. As a result, a lot of time and money is spent on IT developers building integrations with a point-to-point (P2P) connectivity approach.

All this can be simplified if IT integration becomes codeless and manageable by everyone involved. Teams can build integrations faster without relying on IT, eliminate multiple sources of truth, gain more agility, and become easier to work with. Through better process orchestration, business teams can leverage both new & old technologies and compose them into new service solutions and that too without IT intervention.



Why is Point-to-Point Connectivity Bad?

Many enterprises find that integrating applications with external customers and partner organizations using point-to-point connectivity is a complex job. This is a fundamental challenge faced by medium to large organizations which amass a large number of applications to support their business. Moreover, some of these 15-20 applications may be on-premise while others may reside in the cloud. Tricky operational part is moving data between these applications.



More IT complexity is created when more databases are created to support these technologies. The data is stored in a variety of file formats, standards, and proprietary formats. B2B customer and partner companies face problems in receiving and sending this data in different formats and using different protocols.

Things get even more difficult when Finance system needs Enterprise Resource Planning (ERP) data or a Client Relationship Management (CRM) system needs ERP data.

Technically, it is not feasible anymore to create point-to-point direct connections to integrate these independent applications and projects. IT teams approach integrations in an ad-hoc manner as business needs arise and this

leads to direct integrations between applications. These integrations lack consistency in terms of technology and data quality. Soon a spaghetti network on interconnections is created that is very difficult and expensive to maintain and manage.

Some vendors propose an API-driven approach to integration but this works well for internal integrations and not for external B2B integration as they require extensive projects.

A single change to one API causes a cascade of changes to other APIs as well. This problem is called as integration hairball. It spawns many other problems that diminish the quality of services delivered to customers.

Pitfalls Associated with the Point-to-Point Connectivity Approach

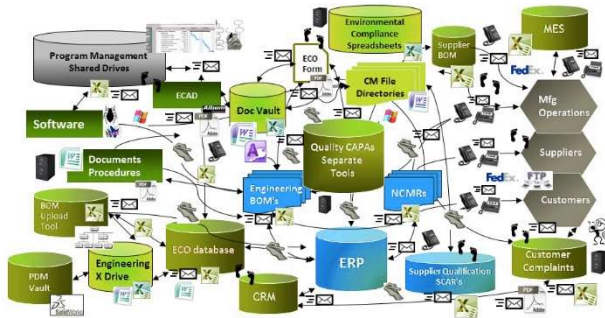
P2P Integration is Costly Point-to-Point connectivity approach might have a low upfront cost but it costs more when more applications in an ecosystem need to be connected. For instance, P2P issues are hardly visible when 2 or 3 architectural components need to be integrated with each other. However, integration cost swells exponentially when many solutions are piled on top of each another, ultimately strangling the IT ecosystem.

Maintenance Issues Every new connection or business functionality addition will result into substantial loss of development hours. Heavy maintenance will be required for fixing high severity production bugs and refactoring the integration setup. An undocumented tangle of code is generated to support mission-critical business systems. Every new P2P connection will have a non-linear, compounding effect on the lifespan of the overall IT



infrastructure. Let's take a use case for explaining this problem

In an IT architecture, two applications, application A, and B are integrated with each other using the point-to-point connectivity Interface. The interface enables application A to converse with application B by executing a procedure. Custom application connectors handle complexities, data transformation, and other relevant feature to access application data. The interface needs to be updated whenever application A or application B needs to be updated. Scenarios, where several small to big applications need to be integrated, will require several such kinds of interfaces. Several new interfaces need to be built when more applications are added. Teams unknowingly create spaghetti architectures while creating connections for these applications. Each interface needs to be separately maintained and developed. In many cases, a single change to one interface causes a series of changes to other interfaces.



Network Breakdowns and Disruptions P2P

integration might look like a straightforward undertaking, but there are many underpinnings to it. It creates bottlenecks, drains productivity, and impedes visibility. Although modern applications provide APIs for integration, they are insufficient for heavy integrations.

P2P connections need to be updated whenever a new version is released or when a partner changes his data format or protocol. In many cases, they change automatically whenever a new version is released. Several downtimes and data errors disrupt business conflicting versions of endpoints. Over time, P2P integrations gain volume, become difficult to manage, and impact the business outcome. Debilitating data errors result in loss of revenue and growth opportunities.

Heavy IT Intervention Enterprises use a wide variety of business systems to execute business operations. Most of these systems are not deployed by IT teams. They are deployed by other departments and business teams. These applications, whether on cloud or on-premise, have their own nature of designer, data model, and silo. With P2P approach, several dependencies need to be created for integrating these applications. In many cases, P2P integrations are deployed haphazardly without proper planning. In the long run, these P2P integrations become a black box of complicated mess which does not deliver visibility of the integrations. Heavy IT intervention is required to monitor the full spectrum of integrations in an ecosystem and to troubleshoot errors and exceptions. A mish-mash spaghetti code of point-to-point interfaces between applications or B2B integrations create constraints and limit agility for business to be responsive or to go after new opportunities.



What is Codeless Future of Integration?



Codeless Integration addresses an important need: Integrating discrete cloud & on-premise systems and enterprise-class suites in simple and non-technical ways. It helps enterprises in integrating universe of applications and developing new capabilities and services without the need of writing a single line of code. Business users can develop technologically sophisticated integrations thrice as strong as point-to-point integrations, enabling organizations to respond faster to business and technology changes.

In retail, for example, enterprises can bridge the gap between physical and digital worlds and deliver a seamless experience to the customer. As soon as a customer would enter a store and try an apparel, his preference data is recorded by the systems. The preference data, i.e., clothing including accessories can be used to improve customer journeys. Similarly, banks can reassess loan portfolio with real-time data reporting of financed physical assets. Moreover, insurance companies can bring real-time data from different systems to validate and respond faster to claims.

Codeless integration is also called self-service integration and the key aspect is that IT teams empower business users to self-create integrations on-demand without active involvement of IT.

In a nutshell, it is a paradigm shift. Integration tools of old have evolved into business applications to provide self-service integration capability to business users. Where IT staff's role changes from active developers of integrations to that of IT administrators for monitoring, governance and regulatory compliance. And business users' role changes from that of 'requesters of connections' to that of citizen integrators.

Core Aspects of Codeless Integration

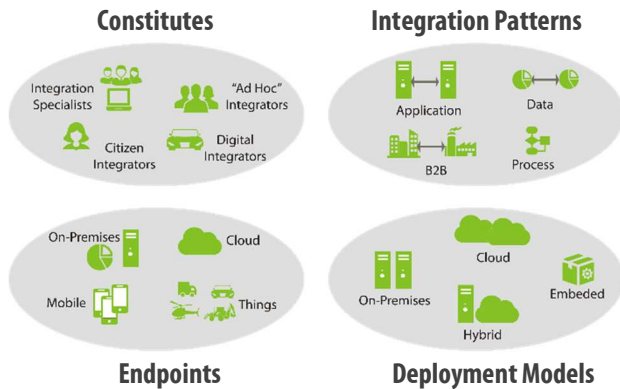
Codeless integration helps non-tech users on four fronts:

Integrate: Build integrations between application to application or partners to enterprise systems in minutes and not months.

Design: Deploy integration design patterns and map data flows without coding as per business needs.

Monitor: Audit all integrations and deliver visibility for error management and compliances.

Govern: Enable updation and governance of integration flows internally or externally across multiple organizations.



It is not just the ease of use that distinguishes zero code integration. It makes integration frictionless and accelerates business transformation. In a hybrid computing environment, zero code integration approach packs elements to address the needs of:

Constituents (or Integrators) Zero Code Integration scales as per different user personas with the relevant user experience, i.e., CIOs, analysts, and application leaders to spur innovation and improve outcomes. Enterprises get access to maximum capabilities to automate integrations without any coding

Integration Scenarios Another key component of zero code integration is custom integration templates – for allowing seamless composition of integration workflows. These features allow in defining workflows for application-to-application (A2A), business-to-business (B2B), etc., between different cloud and on-premise environments as per industry best enterprise integration patterns.

Endpoints An endpoint here refers to the entity residing at the end of transport layer which provides entry to the service, process or destination. No code approach enables

constituents to integrate different endpoints and compute enabled things from a single user interface.

Deployment Models

Cloud hosting or on-premises deployment are options based on infrastructure policies and security needs of enterprises. A flexible zero code integration solution supports this need by deploying applications, services, and data on public cloud or private cloud or on-premises or hybrid networks. It enables users to swiftly move workloads between deployment environments.

Why do You Need Codeless Integration?

Codeless integration is becoming relevant and necessary for every industry and as it helps organizations to be more agile, responsive and avoid disruptions. IT makes the previous integration approaches obsolete and creates opportunities for enterprises to visualize and react to new opportunities.

Gartner terms zero code integration as a high productivity platform and it has got a lot of potential. In the no-code corner, there are citizen integrators or business users who can integrate applications without writing a single line of code. This approach supports more formats, standards, and protocols and makes technology integration problems disappear. Several self-service tasks enable business users to take technology integration at a whole new level. In few simple clicks, business users can accelerate business transformation and eliminate 'Islands of Automation.' The benefits of business users integrating technologies, services, and processes, extend beyond improved efficiency and accuracy. Here are some leading benefits of codeless integration:

Citizen Integration Capabilities Previously business users relied heavily on IT for handling simple integration tasks. A modern-day alternative to change this conventional method of working is a no-code approach. It ensures that the operations like data preparation, CRM system updation, data onboarding, etc. are not the domain of IT anymore. This approach delivers dynamic business user capabilities to set up a strategic integration infrastructure. Business users get the dynamic capabilities to customize cloud streams, apply integration recipes and manage data flows. Business users can automate repetitive tasks for streamlined interactions with partners with adherence to compliances at the same time.

Centralized IT Governance and Control Without Heavy IT Resources Involved Whether it is cloud to cloud Integration, B2B Integration, or any other Enterprise Application Integration (EAI), it can be executed on one single platform. Centralized governance and security allows business users to manage all integrations in a hybrid IT environment.

A single dashboard maintains a lineage of data and historical data and provides a cohesive view of data which is being processed. This helps users in preventing network downtime and errors.

Data transactions can be run from a single platform and business logic can be changed in simple rules. With better process orchestration, the services can be composed in unique software solutions to address business needs.

Faster Customer Data Onboarding Data Onboarding is mission critical for organizations, but it is a different beast altogether. It is also not a once and done matter and it a continuous process for a reason. The IT teams spend several months of time in building data connections and making delicate calibrations to

customize them. They fight endless tough intense battles to build connections with suppliers, third-party administrators, banks, brokerage houses, etc. A no-code approach delivers faster onboarding capabilities to enterprises. It empowers business users to set up connections in a day rather than taking weeks or months.

Makes Enterprises Easy to Work With Traditional approaches to integration are cumbersome and don't scale as per evolving business needs. However, zero code integration approach scales rapidly and allows enterprises to respond faster to customer needs, improve product offerings & services. It helps enterprises in becoming more agile and responsive to go after new opportunities or offer new products and services because they are not constrained by old, slow integration connections.

Self-service abilities to transform and exchange data help businesses drive initiatives with less cost and greater accuracy. Cloud to ground, cloud to ground, or ground to cloud integrations can be made simple while cutting man-hours cost by nearly 90%.



ZERO-CODE INTEGRATION – EMPOWER BUSINESS USERS WITH SELF-SERVICE TO FREE UP IT RESOURCES AND INCREASE PRODUCTIVITY

Companies are perceived as being easier-to-do-business-with which is critical to retain and expand customer base. Enterprises can deliver services faster, elevate customer experience and, and realize many quantifiable benefits.

Operational Cost Saving One of the core benefits of enabling business users to do complex integration is low operational cost. This potential of no code approach has been widely recognized by industry experts. It fosters self-reliance and helps teams to be more reactive to business changes.

Manual and repetitive tasks can be automated and data can be moved back and forth without the need of installing further systems. Users can quickly configure solutions for projects that require real-time data access, validation, transformation, and human interaction with industry best practices and without relying on costly IT intervention.

Conclusion

IT complexity is rising along with the growth in IT consumerization. This complexity in turn is preventing organizations from gaining a competitive edge. Most organizations are still trying to solve this problem with a P2P approach which requires heavy IT support and doesn't address everyday problems that enterprises confront. However, the success with next-generation technologies will be defined by ease of connectivity delivered by a zero code approach. It helps in harnessing a combination of new and old technologies through better automation and control.

About Adeptia

Adeptia is an integration software company focused on connecting enterprises together. Adeptia has been consistently recognized in Gartner and Forrester as an industry-best integration solution provider. Leading organizations, including many Fortune 500 companies, are leveraging Adeptia platform to solve their trickiest integration challenges, sustain disruption, and monetize their complex B2B ecosystems.

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