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RESEARCH NOTE

MAXIMIZING INTEGRATION ROI FROM A HYBRID APPLICATION ENVIRONMENT

NUCLEUS RESEARCH

THE BOTTOM LINE

Although software-as-a-service (saas) application adoption is accelerating, most companies will have a hybrid application environment for the foreseeable future, with traditional on-premise applications handling much of their transactional and historical data and cloud applications and platforms to support more dynamic business requirements. Traditionally, there have been two types of integration strategies: those for cloud applications and those for on-premise applications. However, in looking at companies' evolving IT application footprints and requirements, Nucleus found using a hybrid integration framework that can be optimized for both types of applications lowers initial and ongoing IT costs and maximizes value over time.

As companies' saas applications have become more prevalent and business critical, the challenges of cloud integration have become apparent as well. As cloud integration solutions have evolved, companies have typically had three options:

- Traditional on-premise integration platforms. Traditional platforms can be used to integrate cloud applications with on-premise ones; however, deployments tend to be costly, have a longer time to deployment, and have less flexibility to support changes over time without specialized expertise or consultants.
- Tactical point-to-point connectors. Companies can subscribe to basic cloud connectors that are prebuilt to connect discrete cloud application data fields to data fields in other cloud and on-premise applications. These connector services have a low initial and ongoing cost and rapid time to deploy. However, they are often not architected to meet the scalability, reliability, and auditability requirements for broad enterprise use.
- Ad-hoc, project-based integration. Using vendor-provided APIs and tools, companies can connect cloud and on-premise applications using existing employee skills sets and developer tools or outside consultants. Although this approach is more comfortable for IT, it doesn't scale over time and often requires specialized knowledge or consultants to support any changes or upgrades.

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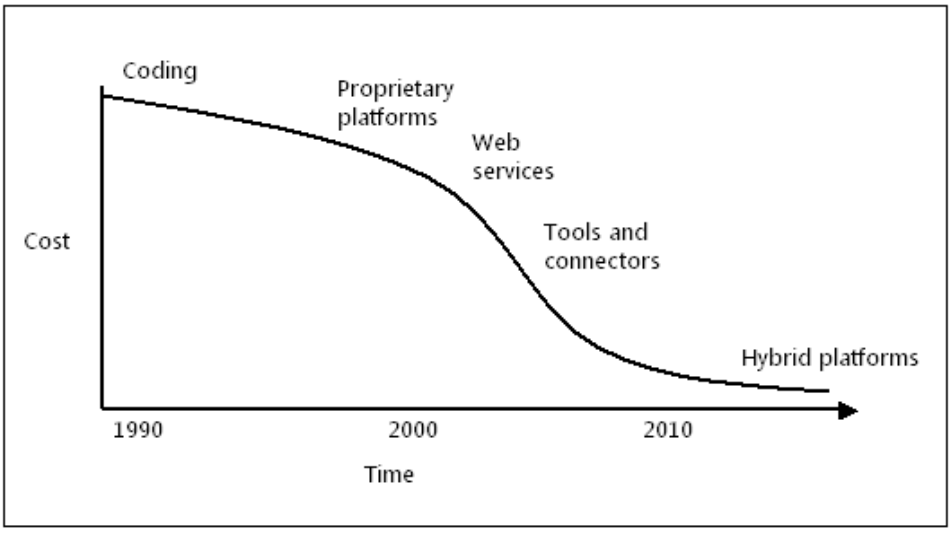
Nucleus has published hundreds of ROI case studies on cloud and on-premise application deployments that have relied on evolving integration technologies over the years, and have found the returns from cloud applications are clear: on average, cloud delivers 1.7 times the return on investment from on-premise applications (Nucleus Research *m108 – Cloud delivers 1.7 times more ROI*, September 2012). This ROI multiplier is driven not just by lower and ongoing costs, but by the ability to deliver greater returns from the applications over time, through expansion, upgrades, or changes to the application that are less costly and disruptive than traditional on-premise application changes and upgrades.

That said, many organizations are still committed to their on-premise applications and are likely to use them for the foreseeable future. In looking at the future of integration, Nucleus found adopting a hybrid integration solution now can accelerate integration today, reduce IT training and skill investments, and move beyond just IT efficiencies to maximize value from each application over time. This is a natural next step in the evolution of integration strategies.

THE ROI FROM TRADITIONAL INTEGRATION

A decade ago, integrations were custom-coded, brittle, and maintenance intensive, and made any upgrades or application changes risky and disruptive because integrations would have to be rebuilt and retested. The advent of Web services and service-oriented architectures (SOAs) gave IT greater efficiencies of scale because they could reuse existing components when integrating on-premise applications. However, while they reduced the initial time and cost of integration, they often still required rebuilding and retesting in the case of an application change, upgrade, or new integration requirement.

THE EVOLUTION OF INTEGRATION



Over time, integration vendors have introduced more business analyst-friendly integration mapping interfaces, so 90 percent of the integration work could be done by non-developers, with developers brought in for more complex challenges or the last mile of integration. Despite these advances in integration technology, companies still typically engaged in integration projects, with the traditional build-test-deploy model, and follow the same path for both the application and related integration points whenever upgrades are undertaken.

THE ROI FROM CLOUD INTEGRATION

Increased adoption of cloud applications has driven demand for integration of those applications with other cloud and on-premise applications, and both traditional integration providers and cloud startups responded with cloud integration solutions that fit the typical cloud application paradigm. In most cases, they were based on a set of prebuilt adapters, designed for less-skilled developers or business analysts to rapidly link cloud applications and data together, and supported ongoing iterative changes and the kind of self service expected by users of cloud applications. Obviously, cloud integration solutions avoid the hardware investment associated with traditional on-premise integration platforms, but there are other important differences as well:

- Lower initial and ongoing software investment. Cloud integration solutions charge an annual subscription fee, typically starting from a few thousand to a few hundred thousand a year, depending on the scope of use. Typically Nucleus has found companies' annual subscription cost is lower than the ongoing license maintenance cost associated with a traditional integration platform.
- Lower initial services investment. The initial services-to-software ratio for a cloud integration project is typically 10 to 20 cents on a dollar. This is largely because there are more prebuilt components that can be connected instead of coded, less costly developer resources can complete more projects, and the duration of projects is significantly shorter.
- Lower initial personnel cost. Many of the cloud integration projects Nucleus has analyzed included limited or no personnel costs, for the same reasons that lower services costs are incurred with cloud projects.
- Lower ongoing personnel costs. Because the cloud provider is responsible for supporting and maintaining the code and business analysts can make changes, there are lower static personnel costs as well as lower time and skill investment needed when changes need to be made.

However, because many cloud integration solutions were developed as point solutions in an immature market, they are often limited in their ability to support the scalability, reliability, and auditability requirements for large-scale enterprise integration projects.

Increased demand for cloud-to-on-premise application integration, as well as the demand to support more complex and scalable integration requirements as cloud applications

have become more mainstream, have driven some traditional integration providers such as Informatica to bring the best features of cloud integration (such as cloud flexibility, agility, repeatability, and cost) with the governance and scalability capabilities of traditional integration. These hybrid integration platforms enable companies to rationalize their overall integration technology investment while meeting their evolving integration needs in a hybrid application environment.

BENEFITS OF A HYBRID INTEGRATION SOLUTION

In looking at hybrid integration solutions such as the Informatica Cloud Platform, Nucleus found that using a hybrid integration solution with the common tooling, shared metadata, a unified user interface, robust APIs, and reusable templates for both cloud and on-premise application integration delivered both IT and business benefits including:

- Reduced training and staffing costs. Although moving to a new hybrid solution requires some initial training costs, use of a common integration architecture for all integration needs reduces ongoing retraining and relearning time and cost, increases the possibility of reuse to reduce the overall time to deliver new integrations, and reduces the overall maintenance burden.
- Reduced overall integration technology (software) investment. Rationalization of an organization's integration portfolio reduces overall software costs by increasing the volume of integrations managed by one platform and the need for additional point purchases to meet specific cloud or on-premise needs. Rationalization also eases initial and ongoing vendor management and finger-pointing in a complex integration environment.
- Faster time to value. A common toolset and reuse capabilities, as well as the ability to leverage the advantages of a more streamlined user interface, reduces the time for business analysts and saas administrators to deliver new integrations and reduces the reliance on limited IT developer resources.

OTHER ROI CONSIDERATIONS

	Traditional Integration	Hybrid Integration
Time to deploy	*Typically 6 months or more*	*Typically 6-8 weeks*
Auditability	*Enterprise-level*	*Enterprise-level*
Scale	*Limited by hardware*	*Elastic*
Data currency	*Varies*	*Real-time or near real-time*
Flexibility / Agility	*Changes require planning, development, testing*	*Changes can be iterative and rapid*
Support skill required	*Developer or business analyst*	*Business analyst or trained business user (self service)*

- More optimal returns from on-premise applications. For companies that will continue to manage their high-transaction volume applications on premise, a hybrid solution

provides the scalability, auditability, governance, and controls needed, and enables them to be centrally managed so the vendor (not the customer) can maintain and support the integration environment and companies can continue a more streamlined upgrade path that maximizes value from their existing application investment. In the case of the Informatica Cloud Platform, the Vibe "map once, deploy anywhere" architecture allows easy reuse of cloud-based integration across on-premise and hybrid application environments.

CONCLUSION

Most organizations will continue to maintain a variety of on-premise and cloud-based applications, and a common platform for hybrid integration enables them to reduce the overall cost and IT time associated with delivering, testing, and maintaining integration over time. A hybrid integration solution leverages the benefits of the cloud while addressing the complexity and scale demands of traditional enterprise application integration, driving faster time to value and lower initial and ongoing costs. Companies adopting them gain the flexibility and agility they need to maximize the value from their cloud applications while ensuring their existing on-premise application investment can be optimized as well.