

Cloud

Commentary

Integrated Cloud Architecture: What It Is and Why It Matters

Before diving into the integrated cloud architecture deep end, you must first understand the challenges.



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The rapid migration to the cloud has only accelerated as organizations, from small to large, embrace the benefits of the cloud and adapt to the new security, performance and scale paradigm. Amid such advances and success (and failures), why introduce yet one more cloud catch phrase: integrated cloud architecture (ICA)?

The answer is because illumination is needed in how organizations are aggressively blending multiple cloud platforms to provide an orchestrated collection of services that leverage the diverse strengths of each respective service/cloud platform.

ICA defined

ICA is founded upon two underlying principles. First, each integrated cloud platform provides a powerful and rich set of capabilities to serve one or more business functions. They can act independently without the need for integration with other cloud platforms; yet, when properly integrated, the

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exclusive. Platforms may provide their native interface for a live in-experience yet pull content in from the other platforms, a specialized aggregation interface may be introduced for an optimized and unified experience across one or more platforms.

Noteworthy trends



- Headless systems or more specifically, headless enterprise content management (ECM) systems may be a term that is somewhat analogous to ICA; however, ICA is more extensive. Whereas headless systems refer in a large part to ECM systems that serve as a back-end repository without a user experience, ICA provides a broader and more comprehensive construct that is being embraced. Yet the absence of a term has kept it away from the spotlight. Hence the need for a formal term and broader industry recognition.
- The Open Data Initiative was introduced by the founding partners of Microsoft, Adobe and SAP. The premise behind ODI is to have data leveraged across their respective platforms and in doing so, introduce efficiencies that would otherwise not be present when these respective platforms are operating independently. The premise of ODI aligns nicely with ICA as it leverages common data and then delivers it into the respective platform (live-in) location.
- The Salesforce.com Customer 360 and Microsoft Common Data Service initiatives are also underway at this point, and these are somewhat similar in their efforts for each respective company. The basic premise of each initiative is to allow for a common data structure that can be employed across their respective product suites/platforms. For example, Microsoft's Common Data Service (CDS) allows for one common data store for Office 365, Dynamics 365, mobile apps and web apps. Customer 360 allows for a common data structure for sales, collaboration, marketing, and all other aspects of their system. Both companies will look to provide enhanced data connection/integration to other systems outside of their portfolio for eased integration. Regarding ICA, these initiatives, consistent with ODI, provide a data integration and data connection layer that allow for more of that live-in experience to be achieved.

Real world example

Three representative cloud platforms would include Salesforce (as a CRM System), Office 365 (as a collaboration and content platform) and Workday (as the ERP System). In this scenario, each respective cloud platform will service an organization's collection of user communities and offer a "live-in" experience for each respective group by accessing the cloud platforms directly. Sales people will live in Salesforce, finance people will live in Workday, and the broader business community may collaborate and share information within Office 365. Yet, executives in the organization may need an experience themselves that provides an optimized live-in experience that aggregates the content from all three sources.

In the latter scenario, a specialized interface may be implemented to deliver on an aggregated executive live-in experience. This may include a high-level chart of key sales pipeline figures (Salesforce), coupled with a list of the 20 top suppliers (Workday) and the most recent marketing campaigns (Office 365); all of which are blended harmoniously together for an enriched and actionable experience.

Web services party

Is this only about web services? In short no, but also partially yes. Yes, in that technically, REST-based web-services are being used to communicate amongst cloud platforms on a regular basis. No, in that while data may be transferred between cloud platforms via web services, the true power of ICA comes in the form of leveraging an extensive set of capabilities offered by each respective platform. In the Salesforce/Office 365/Workday experience, there is an expansive and rich set of services to be employed. Salesforce can be used for creating, managing and transitioning "opportunity" data records and tracking key calls/correspondence. Office 365 allows for a robust collaboration platform in which the employees and partners of the company can perform secured version control on marketing campaign documents and budget forecasts. Finally, Workday is delivering financial reports for receivables, payables and inventory management.

The important point here is that this paradigm is not simply about one web service communicating to another; it is employing best in class capabilities of each products/platforms. Communications between the cloud platforms may happen synchronously, asynchronously, scheduler-based and/or event-based. Furthermore, support for the appropriate audit trails and rollback capabilities (in the event of data corruption or business preference), should be factored into account when planning out your company's ICA strategy.

If an aggregated executive interface is introduced, content from the diverse cloud platforms can be accessed in a centralized fashion, which may include visual representations of how the information comes together. More importantly, key actions are afforded the execs to keep them engaged, interested and optimized. It is also worthy of noting that the aggregated interfaces may be commercial integration tools that blend information together or they can be home-grown custom development initiatives that are uniquely fit for your organization and a set of objectives. They often require large investments; however, the benefits of an aggregated interface can materially increase the value proposition of the investment.

Ready, set, pause

Before going into the ICA deep end, it is important that you have a reasonable understanding of the challenges with ICA as it does require a more

is available and it makes smart business and technical sense, it is often a way to introduce acceleration, stability and reduced risk.

Advantages

- Leverages the strengths of diverse Cloud Platforms
- Live-In and/or Aggregated Interface for optimized user experience

- Complexities of integrating Cloud Platforms are minimized or eliminated.

Disadvantages

- There is a cost (be it purchase or internal development) for successfully delivering ICA.
- If complications arise, a cohesive strategy must be established to troubleshoot and isolate issues.

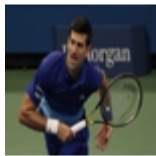
- There is still typically a need to integrate diverse systems and without pursuing an ICA strategy, these typically require multiple initiatives which need to be coordinated.
- Risk of deepening the silo effect

And go

Not dissimilar to other knowledge worker projects, requirements must be gathered, prioritized and challenged, all while involving appropriate stakeholders ranging from your sponsor, business users, and IT support staff. Data exchange, initiation and recovery techniques must be established and regularly validated to have the appropriate confidences in ICA. And this process will require coordination and iterative reviews, coupled with the necessary hand-shaking of others who will be joining you in the journey.

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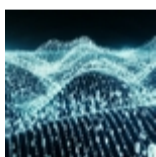
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