



How a Hybrid Integration Platform Can Drive Innovation

Asanka Abeysinghe



Asanka Abeysinghe
Chief Technology
Evangelist
WSO2

Biography

Asanka Abeysinghe is the Chief Technology Evangelist at WSO2 (<https://www.wso2.com>). In his current role, Asanka drives efforts to create, refine, and enhance WSO2's corporate reference architecture and spearheads the thought leadership outlook that defines WSO2's corporate reference methodology for development, customer success, and implementation.

Working closely with customers, partners, and analysts, he will continue to evangelize WSO2's technology vision as in his previous role as VP of Solutions Architecture through which he gained extensive customer consulting experience and in-depth knowledge of solution architecture.

Asanka has over 20 years of industry experience, which include designing and implementing highly scalable distributed systems, SOAs and microservice architectures in the financial domain, mobile platforms, and various business integration solutions.

Keywords Cloud adoption, Hybrid Integration Platform (HIP), Digital transformation, APIs, Data integration
Paper type Research

Abstract

Connecting and standardizing an organization's data and business processes, across its entire application landscape, places a significant strain on traditional technologies, methods, and abilities. While digital transformation and the transition to the cloud can deliver agility, profitability, new revenue streams and lead to exponential growth, there are a number of challenges which can stop an enterprise from moving to a complete cloud solution. The best way forward in accelerating technology changes, driving cloud adoption, and modernizing integrations is through a hybrid integration platform (HIP) explains the author of this article.

Introduction – migrating to the cloud

Digital transformation and the transition to the cloud can deliver agility, profitability, new revenue streams and lead to exponential growth. However, there are a number of challenges that can stop an enterprise from moving to a complete cloud solution. These include the need to adhere to data laws (where regulations and policies prevent companies from moving all their data into the cloud), the necessity of taking a phased approach to shifting existing systems in order to mitigate any negative impact on the business, and other requirements such as security and performance.

Moreover, the increasing complexity of integrating on-premises systems with cloud offerings – which include software-as-a-service (SaaS) applications, vast amounts

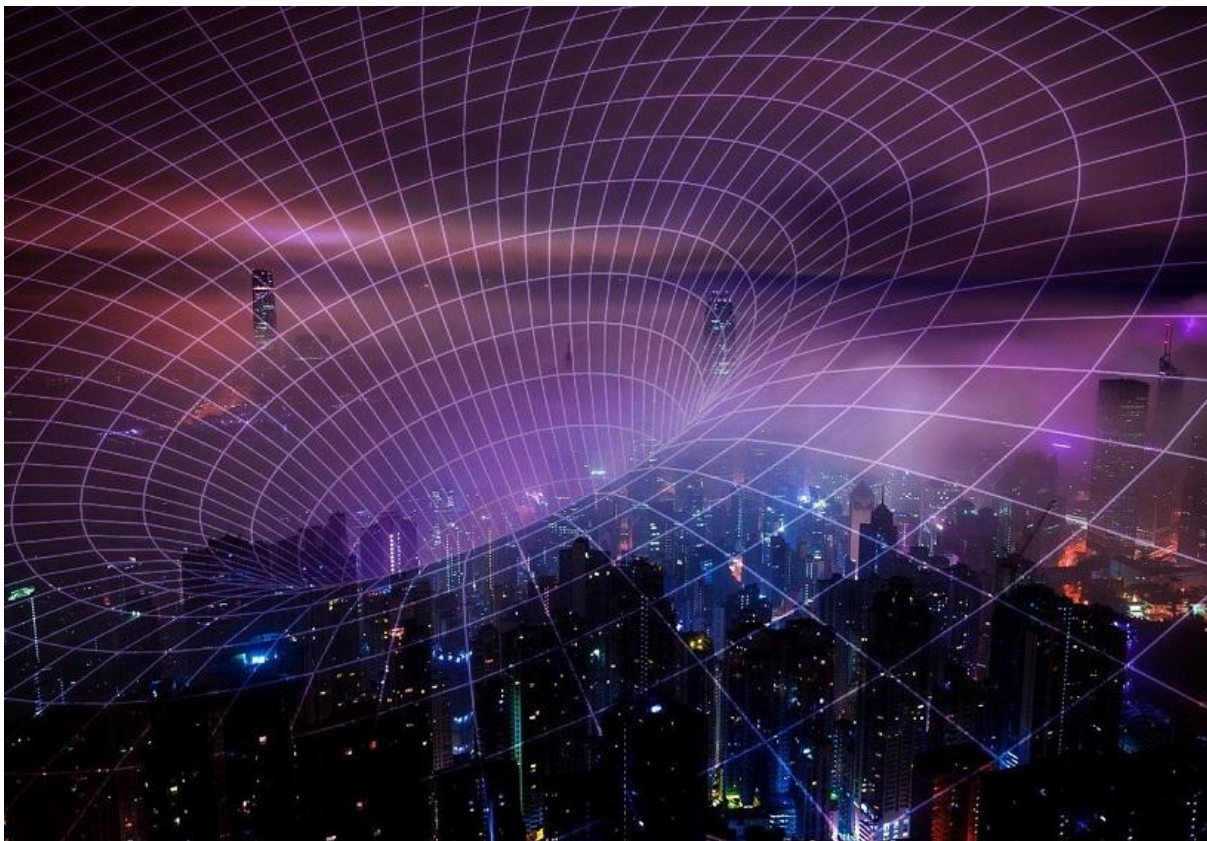


Data Centre and Virtualization

of data, and an explosion of APIs – can overwhelm integration architects and developers. In this environment, connecting and standardizing an organization’s data and business processes, across its entire application landscape, places a significant strain on traditional technologies, methods, and abilities.

This is where a hybrid integration platform (HIP) can really help to accelerate technology changes, drive cloud adoption, and modernize integrations. Let me give you an example – a large multinational sports shoe manufacturer provides ‘trainer aficionados’ mobile access to the brand’s premium training shoe lines via an app, which enables users to set notifications for upcoming releases and track their order status. The brand’s limited-edition shoes generate such demand that they tend to sell out instantly, making it crucial to have digital channels that can scale to bolster surging customer volumes. Also, owing to recent IoT initiatives, for example, information retrieved from sensors in running shoes and smartwatches, integration teams now need to deal with a massive increase in data from thousands of endpoints

“In most cases, the traditional integration toolkit, a set of task-specific integration tools, is unable to address this level of complexity,” according to the *Smarter with Gartner*¹ article. “Organizations need to move toward what Gartner calls a hybrid integration platform or HIP.” Gartner goes on to say that, “the HIP is the ‘home’ for all functionalities that ensure the smooth integration of multiple digital transformation initiatives in an organization.”





What is a hybrid integration platform?

For those less familiar, hybrid integration is the information exchange between multiple applications that are on-premises and in the cloud; a HIP should easily and seamlessly integrate these applications to deliver business functionality. Ideally, it should also provide support for standard and proprietary protocols with minimum configuration.

Forrester² describes HIPs as, “Technologies that simplify and reduce the cost of the development, testing, deployment, and maintenance of application and data interfaces.” Now, more than ever, HIPs are key to the success and the survival of an enterprise. Based on a recent study by Research and Markets³, spending on hybrid integration platforms is expected to grow to \$33.6 billion in 2022 from \$17.14 billion in 2017, which is a CAGR of 14.4%. By 2022, Gartner¹ expects 65% of large organizations will implement HIPs to power digital transformation efforts.

So, what are the benefits?

These platforms reduce development costs and speed integrating cloud and on-premises systems by providing a simplified development experience with built-in capabilities. They also provide secure communication between cloud and on-premises applications as well as well-designed SaaS application connectors and reusable integration templates for commonly used customer use cases.

Additionally, a HIP delivers the ability to seamlessly integrate on-premises systems with business partner systems, mobile applications, IoT devices, and SaaS



Data Centre and Virtualization

applications. This eliminates the need to implement complicated integration scenarios from scratch. Companies can reuse platform-provided functionality to speed integration and reduce maintenance efforts. Other benefits include faster data integrations because it breaks data silos. Managed APIs that expose an organization's data with security and access controls to rapidly build their digital platforms, as well as managed cloud offerings that cater to an organization's business requirements.

What should you look for when evaluating the right HIP?

Choosing the right HIP can be challenging; here are some of the most important aspects to think about:

- **Application and data integration** – One of the key aspects of a HIP is the ability to integrate different applications and data formats and standards to deliver business functionality. IDC⁴ expects 49% of the world's stored data to reside in public cloud environments by 2025. The HIP should provide capabilities such as content-based routing, message transformation, and support for standard and well-known proprietary protocols. Moreover, the platform should be capable of handling data at rest and in transit, in the cloud, and on-premises.
- **Full API lifecycle management** – APIs are key to modern integration requirements. An enterprise should select a full lifecycle API management solution that works well with middleware solutions. This will empower an organization to publish, promote, version, and secure APIs, as well as manage their usage. For example in this Forbes⁵ post, enterprises with advanced API management processes experience up to 47% better business results as compared to enterprises with basic API management.
- **Cloud-Native capabilities** – Many organizations are moving to the cloud to lower staffing and infrastructure costs and to reap the benefits of cloud computing. However, to truly benefit from this, the selected integration platform should be lean and lightweight. Also, many integration solutions need additional support for deployment automation, scaling, containerized applications, and CI/CD workflows.
- **Managed file transfer capabilities** – Managed file transfer (MFT) refers to a secure and efficient transfer of data from one system to another. This can be between cloud, on-premises, or cloud and on-premises instances. MFT solutions can take the form of on-premises software as well as SaaS solutions. Having this capability within the HIP eliminates the added cost brought on by integrating a separate tool.

In conclusion

It is important that an enterprise should select a vendor that is completely aligned with the company's digital strategy and will support its execution. One key aspect that is often overlooked is the strength of the vendor's partner network and the quality of its consultants and supporting services. These aspects play a vital role



throughout the lifespan of a project, from inception to maintaining the system once it goes live.

The cloud and a host of related technologies, which now underlies much of the internet, have enabled modern enterprises to leverage enhanced computing capabilities and break data silos⁶, which is a key driver for digital transformation. Today, almost every organization is in a hybrid state with multiple back-end systems, repositories, siloes, workloads in the cloud, and on-premises operations and the push for higher productivity continues to drive innovation. To fully realize all the competitive advantages that digital transformation can deliver, integration leaders should strategically implement the right HIP to ensure success.

Reference

- ¹ Gartner, (2018), *Use a Hybrid Integration Approach to Empower Digital Transformation*, Smarter With Gartner. Available at: <https://www.gartner.com/smarterwithgartner/use-a-hybrid-integration-approach-to-empower-digital-transformation/>
- ² Forrester Research, (2019), *Total Economic Impact of the Dell Boomi Platform*. Available at: <https://www.slideshare.net/e-SupplyLink/forrester-research-total-economic-impact-of-the-dell-boomi-platform>
- ³ Research and Markets, (2017), *Hybrid Integration Platform Market by Integration Type (Application Integration, Data Integration, B2B Integration, and Cloud Integration), Service Type, Organization Size (Large Enterprises and SMEs), Vertical, and Region – Global Forecast to 2022*. Available at: <https://www.researchandmarkets.com/publication/m5ntlc6/4399397>
- ⁴ IDC Report, (2018), *The Digitization of the World From Edge to Core*. Available at: <https://resources.moredirect.com/storage-optimization/idc-report-the-digitization-of-the-world-from-edge-to-core>
- ⁵ Forbes, (2019), *How APIs Can Transform Your Company*. Available at: <https://www.forbes.com/sites/falonfatemi/2019/03/21/how-apis-can-transform-your-company/?sh=81122ad668c2>
- ⁶ Delmond, M.H., Coelho, F., Keravel, A., Mahl, R., (2017), *How Information Systems Enable Digital Transformation: A focus on Business Models and Value Co-production*. Available at: <https://hal-mines-paristech.archives-ouvertes.fr/hal-01369141/file/A-645.pdf>