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THOU SHALT NOT REINVENT THE WHEEL

The iPaaS architecture is designed to connect various cloud-based as well as on-premises data sources. By and large, the purpose of iPaaS is the same as that of in-house application integration efforts.

What's different is that first, the majority of iPaaS solutions are accompanied by a wide catalogue of predefined, reusable integration templates, as well as toolkits for developing custom connectors. This means that adding new systems, databases, APIs and/or applications to an integration can be done by up to 80% faster.

In addition to that, iPaaS provides a user-friendly interface that makes it easier to visualize and understand the logic of integration flows, while analytics dashboards and logs allow to spot and fix errors quickly and efficiently. Can the same be claimed about in-house integrations?

According to Gartner's Information Technology Glossary, Integration Platform as a Service (aka iPaaS) is a suite of cloud services enabling development, execution and governance of integration flows connecting any combination of on-premises and cloud-based processes, services, applications and data within individual or across multiple organizations.

Gartner

HAND IN HAND WITH THE REALITY OF THE PRESENT

In an ideal world, technical teams take care of all things IT, while business teams focus on building new strategies, on business-critical operations, and other crucial **business** processes. A decade or two ago this might have even been a correct distribution of responsibilities and tasks. Not anymore, though.

More and more job roles are getting increasingly interconnected, with the scales tipping, admittedly, more to the technical side. In other words, you probably won't find a developer who needs to launch a Google ads campaign once in a while, but a regular salesperson might very well need to connect to their CRM a new intelligent reporting tool they are currently trialling.

With new solutions and new use cases springing up nowadays like mushrooms after the rain, the integration needs are growing faster than IT teams can handle. iPaaS solutions tend to be easy-to-learn and easy-to-use not only for IT people, but also for non-tech folks. Therefore, iPaaS is able to support the growing trend of users requiring ad hoc integrations. Let's review each group in a bit more detail:
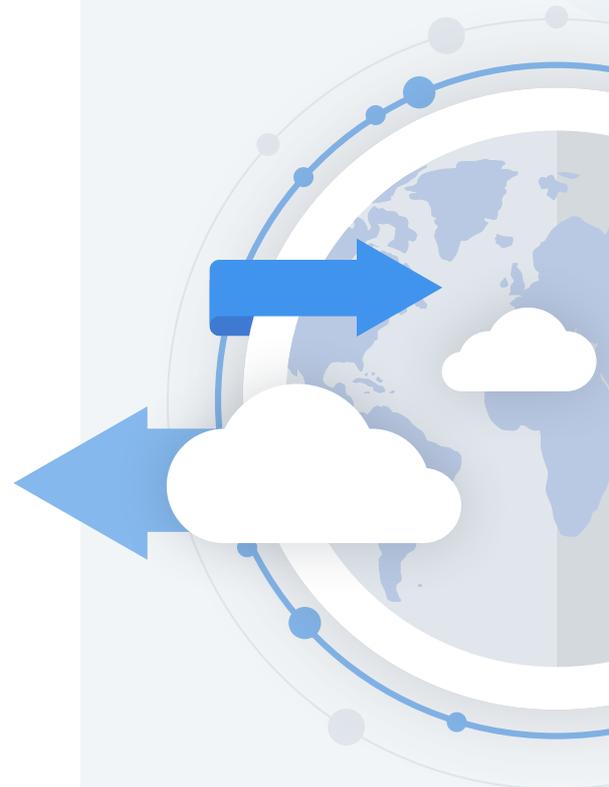
✔ INTEGRATION SPECIALISTS

With integration specialists being the driving force behind digital transformation, it is time-saving for them to be able to share their know-how across the whole organization.

Many iPaaS offerings support Open API initiatives and provide a number of utility connectors for different protocols and formats such as SFTP, HTTP, JDBC, SMTP, CSV, OData, REST and WS/SOAP. This enables integration specialists to create their own integration components for SaaS, IoT and Mobile projects and deploy them on iPaaS for quick access across all departments.
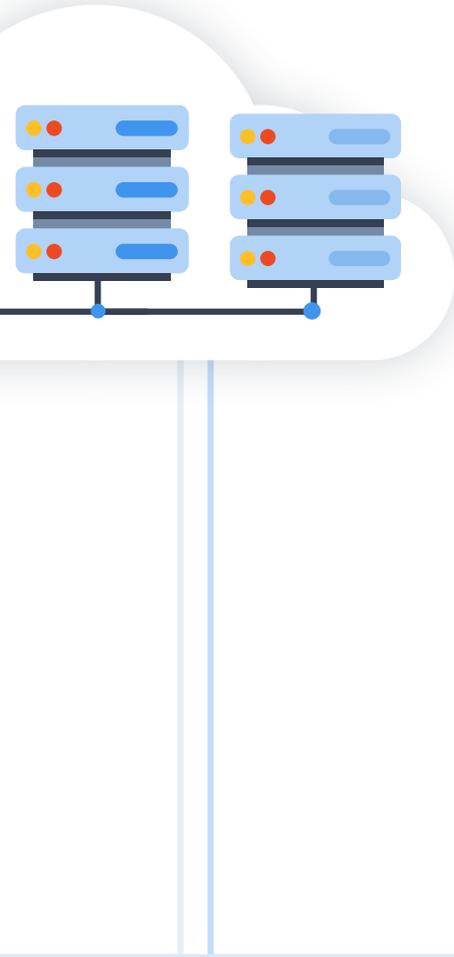
✓ AD HOC INTEGRATORS

With the agile IT strategy principles being increasingly adopted within organizations, developers who are not specialized in applications and systems integration are now required to do this from time to time within the scope of their own projects, be it development of a custom mobile application or an internal database.

A large number of iPaaS solutions comes not only with a library of predefined integration components, but also with Software Development Kits for different languages, for instance, Node.js, Java or PHP. Such SDKs in particular ensure that developers can perform occasional integrations with ease. This standardized approach to integration ensures the overall decrease in development efforts by a factor of 10.

✓ CITIZEN INTEGRATORS

Line of business managers are forming nowadays a new class of integrators within organizations, taking certain simple integration scenarios into their own hands. It can be as much as plugging in all incoming leads to an organization-widely shared Google Spreadsheet file or connecting multiple martech applications to better understand your customers journey. The encouragement of such initiatives is crucial for IT organizations to ensure a higher level of automation and a more agile approach to adoption of new technologies within organization.

Some iPaaS solutions offer an easy-to-use interface that doesn't require any notable programming skills. Such offerings can help corporate IT encourage a smooth collaboration between IT professionals and line of business managers, giving the latter tools to perform simple integrations without heavy IT envolvement.
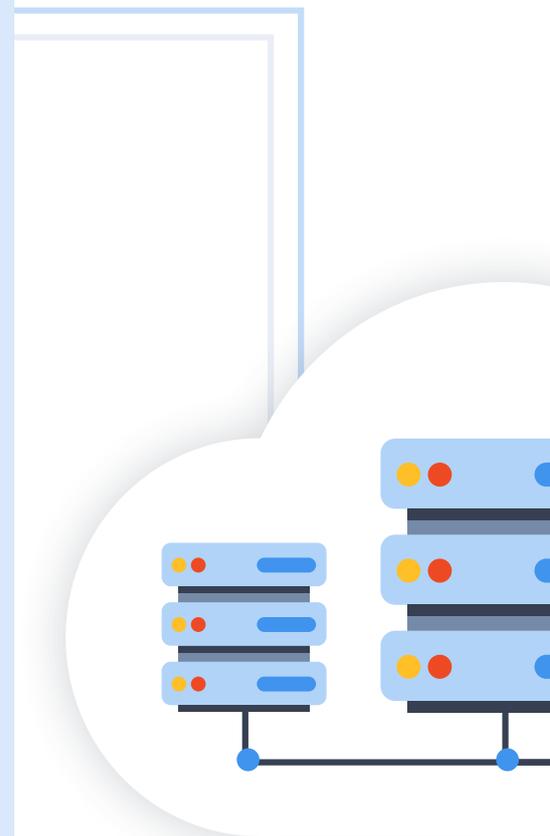
FROM CLOUD-CLASSIC TO IOT-EXOTIC

Originally, iPaaS was built with integration of cloud-based applications in mind. This was a long time ago, though. Since then, the application cases have evolved and extended, with iPaaS being seen now as a crucial player in smooth data exchange between many different kinds of systems. Some use cases are pretty obvious, while others might bring you to uttering a hardly audible 'aha!'. Let's dive into this probably non-exhaustive list of various ways you can use an iPaaS solution.

APPLICATION TO APPLICATION

That's a classic one. Think about any common integration scenario like connecting recently adopted cloud-based applications, systems, databases and platforms to the existing IT estate or across other cloud applications. In these cases, an iPaaS is an ideal fit as it enables IT departments to carry out integration projects much faster either by using any of the ready-to-use application connectors or by building custom ones with the help of developer toolkits.

MOBILE

What's better than mobile applications for streamline business processes and getting job done faster and more efficiently?! However, in order to deliver the expected benefits, mobile apps have to be connected to enterprise back-end applications and systems. Here is where iPaaS, with its support of API and various data formats, does the trick, allowing IT to build, connect and monitor API-based touchpoints to integrate mobile apps with other systems, both cloud-based and on-premise.

BUSINESS TO BUSINESS

Nowadays businesses not only need to have their data available across multiple departments and teams, but also exchange it reliably and securely between organizations and companies, for instance, with suppliers of raw materials or goods. Cloud-based integration solutions are usually a natural choice for such B2B scenarios, as we are talking about enabling data transfer between systems that don't belong to one and the same organization. iPaaS fits in this scenario, therefore, perfectly, as not only can it provide connectors to traditional B2B protocols and standards such as EDI or XML, but is also, by definition, available through the cloud. This spares for IT department the necessity to build a backdoor to internal systems and databases sitting behind the firewall and to potentially put them at a security risk.

DATA MIGRATION

Old systems and databases are replaced by new ones; companies get acquired and merged; there is a growing need for a new data warehouse. All these scenarios share at least one common element: data migration. In rare cases it will involve merely extraction and loading data; quite often, a certain level of data transformation has to take place, too. iPaaS solutions come in very handy at the step when you need to map data fields from the data source to the target system. Maybe you found out when designing your migration strategy that the target system offers way more data fields that require additional input from a few other (or multiple) data sources. Maybe certain data is incomplete in the source system. By providing a user-friendly integration designer and a clear logs overview, iPaaS solutions make the process of data preparation and data mapping considerably more time-efficient and less of a headache.

INTERNET OF THINGS

IoT is all about data coming from different endpoints. However, when we think about it, all this data is useless, unless it is fed into other applications for its accumulation, analyses and utilization. Many native IoT platforms can handle simple integration scenarios. However, things might get complicated when it comes to more complex integrations with multiple enterprise cloud and on-premise systems. This is the reason why companies often bring iPaaS into their IoT integration projects. In addition to that, some iPaaS solutions have very high scalability and performance while keeping the latency low, which is ideal for real-time or near-real-time integration scenarios.

API

There is hardly an IT application nowadays that doesn't provide an API that specifies how this application should interact with the rest of IT ecosystem. In addition to that, there is also an increasing amount of use cases when corporate IT teams create APIs themselves to use them within their respective organization and its partners. The range of such APIs implementation can go far beyond SaaS-to-SaaS or custom application integrations. In more complex digital transformation scenarios, it is quite a common practice to use APIs to connect for example IoT or Mobile platforms to a lightweight integration middleware like iPaaS, and then connect the latter to a legacy ESB.

DATA ANALYTICS

The role of data analytics has, undoubtedly, risen to a sky-high level within the past few years. And that is for a good reason, of course: The sheer amount of data sources available today to organizations makes it nearly impossible to make any sense out of it, let alone derive some actionable insights from it, without the help of some central analytics system. Yet this is the most time-consuming task, with data scientists reportedly spending nearly 80 per cent of their time to collect data sets, and to clean and organize data. iPaaS helps here automate data collection and maintain an overview between analytics and all data points connected to it, eliminating data silos, allowing for integration errors to be fixed quickly and for new data points to be added quickly and with minimum resources.

CHATBOTS

When you hear the word "chatbot", are you thinking about an annoying chat window in the bottom right corner of a website, that pops up with a load 'plop' as soon as you land on the page? Yes, I am, too. But chatbots can, in fact, go beyond being an irritating barrier between yourself and a website. When integrated into corporate communication tools and connected to various enterprise applications such as CRM, Support Ticket Systems or even ERP, chatbots can deliver information in the blink of an eye and enable employees to be more productive and effective. Think your mini and very smart personal assistant. In this integration scenario, iPaaS solutions ensure very fast processing of requests and responses, while their native APIs – if provided – allow for an easy API aggregation.

TECHNOLOGY THAT IS
HERE TO STAY

The concept of iPaaS has an almost decade-old history, with the areas of application and usage continuously evolving and extending over the past years. As one expert elegantly put it – "iPaaS is no longer the new kid on the block".
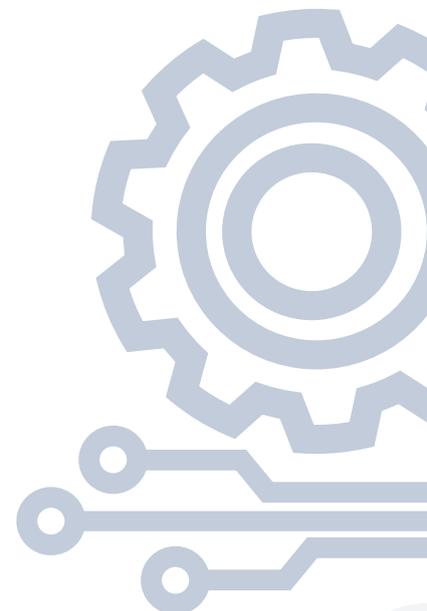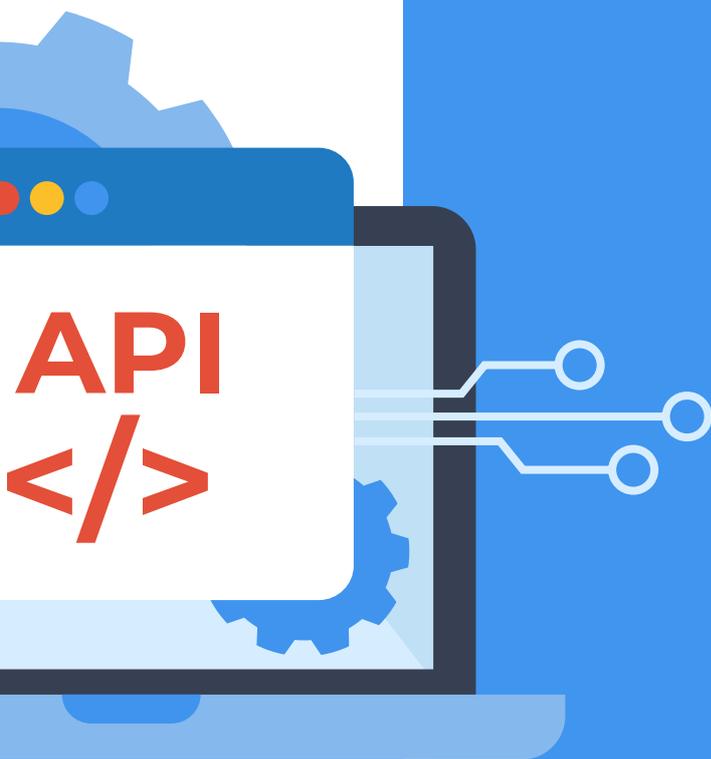
More so, it has particularly grown in popularity in recent years, partially because more and more organizations became aware of its advantages, and partially because it addresses the very needs of a modern IT architecture. In a sense, iPaaS is cleaning up the mess that SaaS movement has created by, on the one hand, simplifying and increasing the adoption of applications, and on the other, causing the formation of data silos across entire organizations.

More and more companies now understand that with iPaaS, they are investing not just in yet another hot fix, but in a future-proof technology that will only continue to grow and strengthen its positions in the coming years.

Want to find out how you and your organization can make use of the iPaaS advantages? Let's get in touch and find it out together. Sign-up for your free trial of the elastic.io iPaaS on our website or contact us if you have a concrete use case in mind.

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