

Parting the Clouds: Understanding the Difference Between SaaS and Cloud-Native Technology

Despite the rapid growth and adoption of cloud computing, there's still a general lack of understanding about the different terminologies associated with it — cloud-native, cloud-based, SaaS, PaaS, IaaS and so on. For enterprises who plan to adopt cloud computing, this understanding is critical to identify the right software solution and realize the true benefits of cloud technology.

This white paper discusses the fundamental differences between true cloud solutions and software as a service, and how these differences can impact their ability to meet your current and future business requirements.

In the last few decades, technology has advanced at such a rapid pace that anyone not closely involved in its design and implementation may see little reason to acquaint themselves with the ‘tech terminology du jour’. After all, these terms and phrases often emerge or become extinct as quickly as the technology they are used to describe.

Procurement software is no exception. It has evolved from on-premises (or behind the firewall) solutions to SaaS and Cloud computing – apparently the minimum expectation for keeping pace with technology evolution today. In many ways, a growing distance between procurement and the technology used to automate its processes makes sense. After all, isn’t the advancement being seen supposed to alleviate the need for companies to understand each solution down to the code level? While, generally speaking, making procurement technology more user friendly offers great strategic advantages, in some cases our peripheral relationship with how it actually works causes us to be overly casual when we characterize its capabilities.

To understand the difference between cloud-native software and Software as a Service, one has to understand the architecture behind them.

Why SaaS and Cloud-Native are Not the Same

Broadly describing procurement technology in the cloud as SaaS/cloud technology belies the difference between the two, unintentionally watering down the differences between the options available today.

It is true that cloud technology is managed ‘as a service’, but the two terms actually have little in common. Software that is delivered ‘as a service’ – which includes the vast majority of enterprise software in use today – allows the purchasing company access to the solution provider’s intellectual property on a subscription-based cost model. The purchasing company does not own the software outright or have a unique installation, instead it pays for access to the software’s functionality. Because of this delivery model, companies do not have to administer the infrastructure or maintenance in house that they did using on-premises software. This includes facilities, staffing, upgrades, communications, and updates.

Definitions Don’t Help

Software vendors rarely agree on anything that isn’t closely defined and universally accepted. In this respect, any distinction between SaaS and cloud is a matter of opinion. Wikipedia suggests that SaaS is in fact a subset or a type of cloud computing, representing just the application “layer”. Other sources suggest that the two terms are interchangeable and that it is even possible to have a “private” cloud.

For the purposes of this paper, then, we’ll set out our definitions clearly. SaaS we’ve described. What we are calling cloud for the purposes of this paper is what elsewhere is defined as Platform as a Service (PaaS).

But we must define the terms a little further in respect of which parties are responsible for which elements of the whole. In our chosen definitions, a SaaS model has the application vendor responsible for some — if not all — of the infrastructure and underlying components on which the application sits. Our definition of cloud (PaaS) has those components squarely in the hands of the cloud provider. The application vendor develops and deploys their software directly on the cloud platform.

It is this key differentiation between the two models that matters here. Call it SaaS vs cloud or SaaS vs PaaS, the story remains the same.

Cloud technology, on the other hand, is characterized by its architecture rather than by a commercial model. Technology hosted in the cloud decouples the application from the infrastructure (i.e. memory, databases), and is often described as Platform as a Service (PaaS). While this may seem like just another term du jour, the distinction is one that procurement and supply chain professionals should be able to relate to: while SaaS subscriptions involve a solution provider and the company that will use the software, PaaS subscriptions involve a solution provider and a hosting platform, such as the Microsoft Azure Cloud Platform.

Each solution provider's Microsoft Azure (i.e.) account benefits the end users subscribed to their solution, and the platform (along with its flexible demand or elastic pools of resources) is scaled and consumed across all of the solution provider's clients. The resulting chain of relationships – you might even call it a supply chain – puts the platform to use for solution providers who in turn sell software subscriptions to a number of clients.

Even once the differences between SaaS and Cloud have been delineated, confusion may remain because even the cloud is not always the cloud.

- **Cloud-native:** Thinking back to the example of Microsoft Azure serving as the PaaS of choice for a SaaS solution provider, it is critical to point out that cloud-native solutions must be built upon one specific platform. The deep level requirements of the cloud separate the application from the architecture. Solution providers working through this model are able to focus entirely on workflow patterns and user interface, leaving the messaging, security, and database balancing to their PaaS provider. Directionally speaking, cloud-native solutions are built 'up' from one specific platform.
- **Cloud-based:** When SaaS solutions are not designed for one specific platform, but are instead migrated from a legacy SaaS model to Cloud-hosted infrastructure, they are described as cloud-based or hybrid cloud. In a cloud-based scenario, less responsibility is handed off to the platform provider, resulting in a division of labor that more closely resembles residency in a shared space than a full third party relationship. If cloud-native software is built 'up' from a platform, cloud-based software is moved 'over', taking advantage of the increased hosting performance without actually changing the software's architecture.

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Why It's Important to Make a Distinction Between the Two

Despite all of the changes discussed thus far, the mindset around B2B software hasn't changed much – particularly in companies that have a legacy driven by ERP systems, many of which may have been designed for their own unique and particular use.

While this fact may seem as though it could be relegated to a small handful of companies still running home-grown solutions, it continues to play an influential role in how decision makers regard the differences between customization and configuration, and what is possible with cloud software. Because

cloud-hosted solutions are multi-tenant, meaning that more than one company is accessing a single code base, it cannot be customized. It can, however, be configured along the lines laid out by the solution provider. For this to accommodate the needs of a broad range of companies, the solution provider must have a solid understanding of the range of requirements likely to be seen in its user base.

While this may seem confining at first pass, a configured versus customized approach is a good match for the needs of procurement processes – particularly those that understand their true role is to manage the information flow central to effective spend management rather than dictating a lengthy series of keystrokes that constrict how purchases are made throughout the organization. When considered through this view, the majority of procurement’s software requirements are shared across industries, making it a key target for cloud software.

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Does it Really Matter Which Solution You Use?

Fundamentally, it shouldn’t matter whether your business software is SaaS or cloud by the definitions proposed in this paper. From an operational and legal perspective, the concern should be with the SLA offered by your service provider and adherence to the same. But the reality is more complex as we have seen.

As things stand at any given moment, a software system provided “as a service” should be straightforward to access and robust, offering no management issues to the customer at all. It should be of no consequence how the underlying delivery mechanism is structured or defined.

What does make a difference, however, is what happens at moments of upheaval or steady change. Growth in user load – whether organic or step-change – can see demand quickly outpacing capacity for any system. Mitigating the impact becomes dependent on how quickly and seamlessly the system can be resized to fit. If the change is in the opposite direction, it may be due to a massively over-specified system.

Between steady growth and sudden shrinkage there is the more commonplace reality of variable demand and unpredictability. And this is where the details of the underlying model really can become important. What is important is not whether you have the right SLAs today but whether the service can change with you. Tomorrow’s required SLAs could be quite different and the fact is that the way the “as a service” system is built fundamentally determines whether it can meet the SLAs today and tomorrow.

While it is entirely possible that in time there will be something beyond SaaS, PaaS, and cloud-native that procurement technology will have to accommodate, procurement professionals owe it to themselves to separate the commercial model from a platform-driven approach to architecture design – both for the sake of understanding what kind of software they have in house today and what kind of software they want to have in place to meet the opportunities presented in the future. ■

Recommended reading for sourcing and procurement professionals

Procurement Software GPS: Strategies To Navigate The Technology Landscap

In this new white paper, noted industry veteran Andrew Bartolini of Ardent Partners and experts from GEP highlight strategies to help you find the right procurement software for your enterprise. The paper also shares useful tips and advice to help procurement teams gain maximum value from their current technology investments. [DOWNLOAD NOW](#)

Source-to-Pay Automation Playbook

This new white paper from Procurement Leaders Magazine shares authoritative insights and practical advice from leading S2P technology experts on what to do AND not do while implementing S2P Automation. An essential resource for procurement pros looking to drive higher savings and performance from source-to-pay software. [DOWNLOAD NOW](#)

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100 Walnut Avenue, Clark, NJ 07066 | P 732.382.6565 | info@gep.com | www.gep.com

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