



Imagining everything, reimagining architecture

How containerization and PaaS capabilities can help support 'everything as a service' and the next-generation kinetic enterprise

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Cloud computing continues to revolutionize how organizations do business today, allowing them to access a variety of service-based offerings—platforms, software, infrastructure—without the typical cost and maintenance concerns. But as cloud technologies evolve, the possibilities extend far beyond “platform as a service” (PaaS), “infrastructure as a service” (IaaS), and “software as a service” (SaaS). We have entered a new era of “everything as a service” (XaaS).

“Everything as a service” fits with the vision of a standard, flexible architecture model that can drive efficiency, reduce hardware and labor costs, and foundationally support speed, flexibility, faster response to market demands and rapid outcomes. As a strategic, innovative, and operational blueprint, XaaS envisions business capabilities, products, and processes not as discreet vertical offerings operating individually in silos, but as a collection of horizontal services that can be accessed and leveraged across organizational boundaries.



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Envisioning everything

In the vision of XaaS, a few platform modernization moves and strategically deployed APIs, for example, can let you radically transform a customer service module in your ERP system. With XaaS, you can turn a module used exclusively to support external customers into a module that can support departments across your organization—by IT for help-desk queries, by HR for internal customers, and by logistics for vendor support, for instance.

For organizations operating with SAP® solutions, building out an “everything as a service” vision can support the next-generation kinetic enterprise—an evolving organization that can quickly adapt to rapid business and technological change and needs. But it doesn’t happen automatically.

“For organizations operating with SAP solutions, building out an “everything as a service” vision can support the next-generation kinetic enterprise “

It depends on your ability to leverage technologies such as PaaS solutions and containers. Doing so can provide a starting point for adopting “everything as a service” and building an “inevitable architecture” in which complexity gives way to simplicity and flexibility. Here are a few things to know.



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Containers can make things easy.

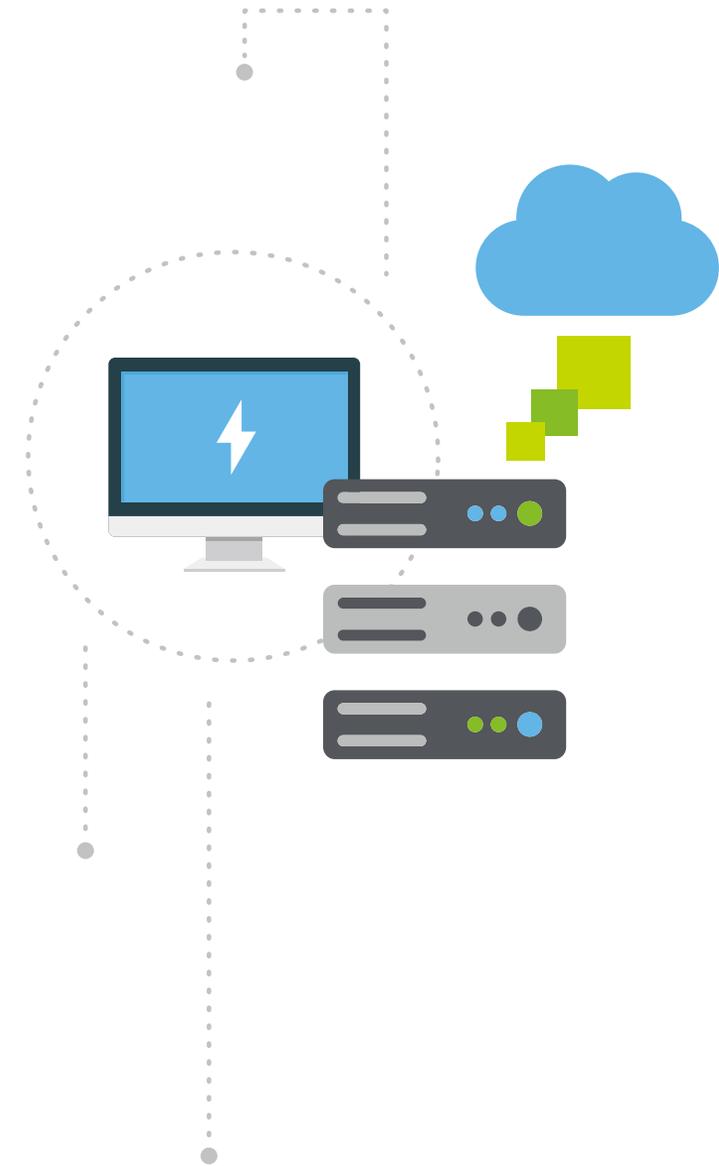
Containers, as the name implies, serve as fully encompassing, lightweight, platform-agnostic software packages (like executable files) that contain all you need for running an application or service—from testing to implementing to back-up and recovery. Containers can include libraries, configuration code, settings, and other system tools.

The beauty of containers is that they enable a headless or serverless approach, in which you can put a container on a platform and remove worries about infrastructure. And because containers can run in isolation from one another and from the surrounding environment, you can eliminate concerns about compatibility and conflicts. A container—which includes a

built-in operating system “image”—should run the same every time, no matter the environment. The more organizations turn to PaaS to develop and deploy capabilities, the more containers will serve as an efficient means for getting the work done.

Containers also can help you move fast

The lightweight, ready-to-run aspect of containers means that you can use them to reduce development cycle time and support an agile development model. Developers and quality-assurance specialists can avoid repetitive steps, thanks to all necessary assets being built into the container—with all the required tools and code together in a contained, compiled version. Want to leverage a cloud platform to integrate your on-premise systems with applications you are already running in the cloud, for example? Using a container that already contains all the libraries, code, and tools you will need can help accelerate your integration timeline.



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With PaaS offerings maturing, containers will matter even more.

The speed and simplicity of containers promise to make them critical to how organizations develop and deploy applications via PaaS offerings. PaaS offerings are exceedingly mature today, and they are helping organizations make the most of cloud-enabled capabilities.

Containerization takes things a step further—helping to make PaaS easier. What does that mean for organizations using SAP solutions? For one, it means that they can expect containers to appear on the horizon for SAP Cloud Platform—with an expected ecosystem of vendors providing containerization offerings. Second, the rise of containers in the PaaS space means that SAP-centric organizations can more easily and more rapidly extend the capabilities of their existing

SAP solutions, integrate those solutions readily with one another and with other systems, and move closer to a simpler architecture.

Containerization on PaaS offerings such as SAP Cloud Platform does not come without challenges, however. Locking down effective licensing models and version control for digital assets can present potential obstacles. Version control can become a particularly tricky issue to manage when bundling, say, 20 items in a container you will use to deploy an application.

There's still some work for you to do

The march toward simple, flexible inevitable architecture and “everything- as- as- service” will take place amid ongoing disruption. Organizations that expect to derive benefits by leveraging containers and PaaS will have to continue to evolve and embrace change. Here are a couple of things to keep in mind.

Stay agile

In addition to investing more heavily in PaaS, organizations will need to remain agile—so they can incorporate new enabling technologies into the picture and so they can deploy new capabilities as the definition of “everything as a service” grows.

Be cloud-ready

Cloud technologies can make things easier, but do not overestimate the simplicity of cloud. Effectively harnessing the power of cloud in your SAP environment requires the right mix of people skills (technical as well as business) plus organizational maturity to support the adoption of new technologies. Deloitte can help.



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Keep your sights set on the potential benefits.

As PaaS and containerization align with available solutions and support the vision of a simpler architecture and “everything as a service,” organizations can reap myriad potential benefits. Here’s an example of what might await you as the new XaaS vision comes into focus through PaaS and containerization.



Accelerated innovation and faster time to market for new products and services



Standardized processes for development and deployment of cloud capabilities



Time savings on IT administration, thanks to capabilities such as auto-scaling



Simplified, optimized IT infrastructure for supporting business goals



Less customization to your core system, making upgrades and transformations simpler



Enhanced productivity and performance for the enterprise



Where do you go from here?

Simple, flexible architecture to support “everything as a service” is just one trend that will likely shape the future of your enterprise. Other technology trends will continue to evolve and intersect with your business, significantly influencing what it means to create the next-generation kinetic enterprise. How will your organization move forward with containers and PaaS solutions? How will you unlock the potential that they bring for reimagining architecture and services? What’s your plan?

Understanding how containers and PaaS offerings such as SAP Cloud Platform fit within a broader SAP-centric ecosystem requires more than vision. It requires a business-focused implementation strategy, extensive SAP experience, and a rich set of tools and accelerators that can help you move fast along the digital transformation path. We can help.

With more than 16,000 business and technology professional focused on SAP solutions around the globe, Deloitte can provide experience and resources to help you meet tomorrow’s challenges—from business strategy to systems implementation and ongoing support.

Ready to move closer to a simple, flexible architecture that can support “everything as a service” and propel you toward becoming a next-generation kinetic enterprise? Contact us to get the conversation started and start exploring the art of the possible.

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