What is SaaS (Software as a Service)?

Software as a service (SaaS) is a cloud-based software delivery model in which the cloud provider develops and maintains cloud application software, provides automatic software updates, and makes software available to its customers via the internet on a pay-as-you-go basis. The public cloud provider manages all the hardware and traditional software, including middleware, application software, and security. So SaaS customers can dramatically lower costs; deploy, scale, and upgrade business solutions more quickly than maintaining on-premises systems and software; and predict total cost of ownership with greater accuracy.

In the early 2000s, the first generation of SaaS solutions was siloed, inflexible, and designed to solve a single business problem. Since then, SaaS has evolved dramatically. Today, modern cloud applications can span—and connect—everything from financials, human resources, procurement, and supply-chain processes to commerce, marketing, sales, and service solutions. Other benefits of a modern, complete SaaS solution include:

**SaaS benefits**

Software vendors spent the last several years bombarding IT professionals and business executives with messages about the advantages of [cloud computing](https://www.oracle.com/in/cloud/what-is-cloud-computing/) in its various forms. Some of these messages targeted the accountants and number crunchers by discussing the advantages of operating expenses (OpEx) compared with capital expenditures (CapEx). Others targeted the IT community with messages about scalability, on-demand capacity and the cloud's ability to take over the mundane tasks of infrastructure management and allow IT talent to focus on business problems.

There is a great deal of truth to each of these arguments, but little energy has been devoted to explaining to LOB managers why business applications delivered in the cloud via the SaaS model and paid for on a subscription basis not only make a great deal of sense, but are key to bridging the innovation gap executives often complain about to their IT organizations.

SaaS is not a new concept. In fact, web-based applications delivered by application service providers (ASPs) actually pre-date the "cloud computing" concept as we know it today. Early applications delivered using the SaaS model often focused on [sales force automation (SFA)](https://www.oracle.com/in/cx/sales/sales-force-automation/), [customer relationship management (CRM)](https://www.oracle.com/in/cx/what-is-crm/) and web content management. Today Oracle delivers an entire suite of business applications for [enterprise resource planning (ERP)](https://www.oracle.com/in/erp/what-is-erp/saas-erp/), project portfolio management (PPM), [planning and budgeting](https://www.oracle.com/in/performance-management/what-is-epm/), [financial reporting](https://www.oracle.com/in/erp/financials/what-is-financial-management-system/), [human capital management (HCM)](https://www.oracle.com/in/human-capital-management/what-is-hcm/), [talent management](https://www.oracle.com/in/human-capital-management/what-is-talent-management/), sales and marketing, [customer service and support](https://www.oracle.com/in/cx/service/what-is-customer-service/), social networking, [social marketing](https://www.oracle.com/in/cx/marketing/social-marketing/), and social engagement and monitoring.

Unlike those offered by many of the first-generation ASPs and other SaaS vendors, Oracle's SaaS business applications are modern and next-generation and backed by the Oracle name as well as the billions of dollars it has invested in software development and infrastructure to build and deliver its applications. If you’re a line of business manager looking to get your hands on the latest capabilities without the headache often associated with hefty upgrades, let's dive in and explore the benefits of SaaS applications.

From its inception, the SaaS model was designed to deliver a core set of business benefits over on-premises applications:

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| **Lower up-front costs** | Eliminate the need for additional hardware and middleware. Reduce installation and implementation costs. Validate and correct errors before making updates to your master data. |
| **Predictable ongoing costs** | Eliminate unpredictable costs of managing, patching, and updating software and hardware. Turn capital expenses into operational expenses. Reduce risk with experts managing software and overseeing cloud security. |
| **Rapid deployment** | Get up and running in hours instead of months. Turn on and use the latest innovations and updates. Automated software patching. |
| **On-demand scalability** | Scale instantly to meet growing data or transactional demands. Reduce disruptions while maintaining service levels. |

**Cloud vs SaaS—What's the difference?**

While cost reduction and IT efficiency drove the development of first-generation cloud apps, modern SaaS applications have become platforms for innovation to meet the competitive challenges of the digital age, such as:

* Extending the functionality of your SaaS applications to support collaboration apps like Slack and Zoom.
* The power of small. Cloud, mobile, and social are enabling small and startup enterprises to create innovative products and reach markets with unprecedented speed.
* The age of consumer discontent. Armed with mobile and social, consumers have more choices and more information than ever before.

In response to these competitive challenges, a modern SaaS suite can drive innovation across the business by supporting faster innovation, providing superior customer experiences, and enabling better business decisions with built-in analytics and a holistic view of the entire business.

**SaaS capabilities**

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| **Connected, cross-business solutions** | Connect and optimize cross-departmental business processes. Gain a holistic view of your entire business. |
| **Faster, more flexible update paths** | Access new capabilities on a quarterly basis. Choose to update at the speed of your business, not on a provider’s timetable. |
| **Easy personalization** | Quickly personalize solutions for your business needs. Preserve valuable customizations through updates. |
| **Data portability** | Share and/or move data across SaaS, on-premises, and private cloud applications. Quickly prepare, visualize, and analyze data to see trends and patterns. Incorporate third-party data for rich analytics. |
| **Built-in analytics** | Access data in real-time. Avoid expensive, time-consuming data-egress costs. |
| **Faster innovation leveraging embedded technologies** | Enhance productivity with built-in self-learning and adaptive intelligence. Innovate quickly and continuously across the entire value chain with AI, machine learning, chatbots, digital assistants, IoT, blockchain, and other emerging technologies. |

**SaaS advantages**

Some SaaS providers simply move their on-premises software to the cloud and call it SaaS. This model has its drawbacks and does not take full advantage of the cloud delivery model. In fact, you may end up with many of the same limitations as with on-premises solutions, including significant support bills, high IT-related overhead costs due to the same slow upgrade process, and disconnected systems—all of which reduce innovation and agility in your business.

However, a SaaS suite engineered from the ground-up for the cloud can provide:

**Rapid application development and access to innovations**

Because innovation is so critical in the digital age, businesses want to take advantage of the latest capabilities. SaaS engineered for the cloud speeds innovation cycles and gives you faster access to the latest innovations and applications. By contrast, the on-premises in-the-cloud SaaS model requires you to wait for innovations because of the longer development cycles typical of on-premises solutions and applications.

**Connected SaaS business processes**

Businesses want a SaaS solution that supports like procure-to-pay or order-to-cash in the cloud—without costly integrations and complex management. To make this possible, a modern SaaS suite is built on a single, standards-based platform that includes a common, enterprise-wide data model; a unified user experience (including mobile and social); shared security levels; synchronized release schedules; and more.

**SaaS Products**

**ERP Cloud**

Discover how enterprise resource planning (ERP) cloud solutions can future-proof your business across accounting, analytics, consolidation, planning, procurement, projects, and reporting.  
**Supply Chain Cloud**

Discover how Oracle’s Supply Chain Management & Manufacturing (SCM) solutions help drive innovation and turn traditional supply chains into agile and integrated value chains.  
**Sales Cloud**

Discover how Oracle Sales solutions go beyond sales force automation to optimize your sales engagements through a comprehensive set of capabilities that bolster customer relationships and drive business growth.

**HR Cloud**

Discover how HR leaders are making faster, smarter decisions with Oracle's human resources solutions to drive engagement, productivity, and business value for organizations and the people within them.

**Marketing Cloud**

Discover how digital marketing solutions support B2B and B2C marketers' omnichannel experiences to drive sales, brand, and customer loyalty. Oracle Marketing supports marketing automation for cross-channel orchestration.

**The future of SaaS**

Market experts agree that the future of SaaS is strong. According to a [2017 Gartner report](https://www.gartner.com/en/newsroom/press-releases/2021-04-21-gartner-forecasts-worldwide-public-cloud-end-user-spending-to-grow-23-percent-in-2021), sales of SaaS solutions will continue to grow at over 23 percent per year, from US$270billion in 2020 to over US$332 billion by 2021.

Innovation in the SaaS solutions themselves is expected to help drive that growth, including:

* With the adoption of Artificial Intelligence (AI) solutions on the rise, it is expected to become an increasingly baked-in part of the enterprise of all cloud applications. AI will drive adaptive intelligence solutions, which allows back-office and front-office applications to learn and adapt to user data and behavior.
* Autonomous IT management, AI, and machine learning will also play vital roles in driving more autonomous, less human-reliant management across cloud applications and cloud infrastructure.
* Beyond AI and machine learning, there are an additional set of adaptive intelligent technologies that are driving change to all SaaS applications. These included chatbots, digital assistants IoT, blockchain, virtual reality, augmented reality. Each of these technologies is increasingly vital to digital innovation and forward-thinking providers in how they extend their SaaS offerings.
* Industry SaaS solutions or vertical cloud applications continue to drive depth and horizontal connectedness for organizations. While SaaS began as a way to quickly provide vertical solutions to a single department, businesses increasingly need and expect cross-business visibility. As applications continue to evolve, look for more vertical depth from providers offering cross-business suites as well as more APIs and turnkey integrations for [hybrid cloud](https://www.oracle.com/in/cloud/hybrid-cloud/) solutions.

What is SaaS?

Software as a Service (SaaS) is traditionally considered a cloud-based software model that delivers applications to end-users through an internet browser. SaaS vendors host services and applications for customers to access on-demand. With a SaaS offering, you do not have to think about how the service is maintained or how the underlying infrastructure is managed; you only need to think about how you will use the software. Another typical aspect of a SaaS model is pricing that's paid on a subscription or pay-as-you-use model, instead of purchasing all functionality at once in one big chunk. A common example of a SaaS application is a third-party web-based email application, where you can send and receive emails without having to manage feature additions to the email product or maintain the servers and operating systems that the email program is running on.

While the industry has traditional used terms like Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS) have been used as service groups, at AWS, we focus on solutions to your needs, which can span many service types. This page uses the traditional service grouping of IaaS, PaaS, and SaaS to help you decide which set is right for your needs and the deployment strategy that works best for you.

Why is SaaS important?

SaaS is important because it gives businesses access to powerful software that would previously have been too expensive or energy-intensive to run from on-premises environments. The SaaS vendor manages the hardware, the software tools, and the application in its own data center or cloud environment. You can access the software directly from the browser or mobile application. The subscription-based model of SaaS also means you can scale your use of software up or down as your business needs it. Some benefits of SaaS are below.

**Cloud accessibility**

You can access your SaaS from any device with an internet connection. Under more traditional software models, you could only access business applications from the workstations on which they were installed. This accessibility is increasingly in-demand because of hybrid and home working models.

**Lower upfront costs**

SaaS vendors typically offer a subscription-based model that reduces upfront costs of traditional software such as licenses, installation, or infrastructure management. There is also no need to invest in additional computing resources to run the software, as the vendor manages everything on its servers.

**Reduced ongoing costs**

As the SaaS vendor charges a standard fee, you can confidently plan how much your software services will cost per annum. Ongoing maintenance is overseen by your SaaS providers and covered by your subscription. You'll also avoid paying for increased server capacity if you need to scale up your SaaS solution.

**Rapid deployment**

SaaS eliminates the installation and configuration associated with on-premises software, meaning you can roll out software across your business as soon as your enterprise subscription begins.

**On-demand scalability**

SaaS allows you to easily add more services or storage to your subscription as needed without incurring the costs of upgrading your infrastructure. The scalability of SaaS is perfect for businesses that are growing quickly, as they can add new features and users when it suits them.

**Reliability**

SaaS vendors invest in rigorous [cybersecurity](https://aws.amazon.com/security/) protocols and [disaster recovery](https://aws.amazon.com/disaster-recovery/) capabilities. Many SaaS vendors promise 99% or even 99.9% uptime, meaning all you need in order to work is a reliable internet connection.

**Automatic updates**

Software vendors regularly make incremental updates and security patches to their software. Updates can be set to deploy automatically without the need for IT support.

**Integration**

You can integrate third-party SaaS applications with other platforms and systems using [APIs](https://aws.amazon.com/what-is/api/). You can customize the software to suit your particular requirements without infrastructure costs.

**Real-time data and analytics**

SaaS applications often collect data regarding usage and performance, and can offer insights in real-time.

How does SaaS work?

Software as a Service works through a cloud delivery model. SaaS vendors commonly host applications and data on their own servers and [databases](https://aws.amazon.com/products/databases/), or utilize the servers of a third-party cloud provider. SaaS vendors also manage platforms, operating systems, and middleware.

Once you subscribe to a SaaS solution, the SaaS vendor grants the customer access to the application through web browser user registration and login. SaaS vendors usually adopt a multi-tenant model, meaning a single version of the SaaS solution will be hosted on the vendor's servers and provided to individual subscribers.

**Service level agreement**

A service level agreement (SLA) is a legal contract that sets the terms and conditions of using the SaaS product. It covers what your SaaS vendor offers and service expectations such as uptime, security, support, and automatic updates, while also outlining your responsibilities as a client. For example, most businesses need to own their data regardless of where their information is held. A standard SLA will confirm in writing that your company retains ownership of its data and your right to retrieve it at any time. In the vast majority of cases, you can download your data and back it up locally at any point.

[Read more about service level agreements (SLA)](https://aws.amazon.com/what-is/service-level-agreement/)

What are some commonly used SaaS applications?

There are several commonly used types of SaaS applications, including:

* Customer Relationship Management ([CRM](https://aws.amazon.com/marketplace/b/98bce01b-8e07-4a83-8e4e-711ce14f2e88?category=98bce01b-8e07-4a83-8e4e-711ce14f2e88))
* Enterprise Resource Planning ([ERP](https://aws.amazon.com/marketplace/search?searchTerms=erp))
* Email marketing software
* Accounting software
* Human resources software
* Security software
* Collaboration tools
* Document editing services
* Communication software
* Contact Center software

How does SaaS compare with other traditional cloud services models?

SaaS is one of three main traditional models for [cloud computing](https://aws.amazon.com/what-is-cloud-computing/), alongside Platform as a Service (PaaS) and Infrastructure as a Service (IaaS).

**Platform as a Service**

Platform as a Service provides hardware and software infrastructure for constructing and maintaining applications typically through APIs. Cloud providers host hardware and software development tools in their data centers. With PaaS, you can build, test, run, and scale applications faster and at a lower cost.

[Learn more about Integration Platform as a Service (iPaaS)](https://aws.amazon.com/what-is/ipaas/)

***SaaS vs. PaaS***

Whereas SaaS is used to do specific tasks, PaaS gives you access to managed infrastructure for application development.

**Infrastructure as a Service**

Infrastructure as a Service (IaaS) provides services for networking, computers (virtually or physically), and data storage. Using IaaS delivers the highest level of flexibility and management control over your IT resources, and is similar to existing IT resources.

[Learn more about Infrastructure as a Service (IaaS)](https://aws.amazon.com/what-is/iaas/)

***SaaS vs. IaaS***

SaaS offers the most comprehensive third-party software and maintenance choice, whereas IaaS only supplies and maintains core components such as servers or storage. IaaS is considered a favorable option if you want maximum control of your environment, while SaaS is preferable if you're looking for ease of use.