Software as a Service (SaaS)

The traditional model of software distribution, in which software is purchased for and installed on personal computers, is sometimes referred to as Software-as-a-Product. Software-as-a-Service is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet.

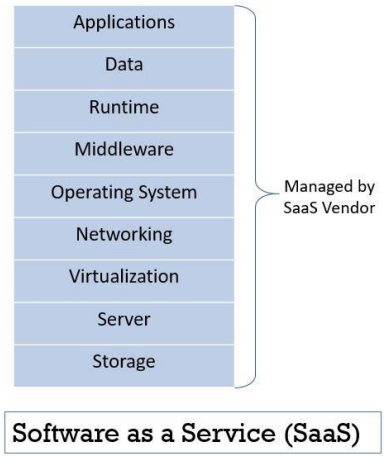
Service Oriented Architecture (SOA)

A service-oriented architecture is essentially a collection of services. These services communicate with each other. The communication can involve either simple data passing or it could involve two or more services coordinating some activity. (A service is a function that is well-defined, self-contained, and does not depend on the context or state of other services.)

Software-as–a-Service (SaaS) model allows to provide software application as a service to the end users. It refers to a software that is deployed on a host service and is accessible via Internet. There are several SaaS applications listed below:

1. Billing and invoicing system
2. Customer Relationship Management CRM
3. applications Help desk applications
4. Human Resource HR solutions

In SaaS, the entities that you require to run the software such as runtime environment, middleware, operating system, networking, virtualization, server storage, and data are also managed and maintained by the SaaS service provider.



Examples of SaaS Services are Google Workspace, Dropbox, Salesforce, Cisco WebEx, Concur and Slack

Feature of Software as a Service SaaS

- SaaS makes the software available over the Internet.
- The software applications are maintained by the vendor.
- The license to the software may be subscription based or usage based. And it is billed on recurring basis.
- SaaS applications are cost-effective since they do not require any maintenance at end user side.
- They are available on demand.
- They can be scaled up or down on demand.
- They are automatically upgraded and updated.
- SaaS offers shared data model. Therefore, multiple users can share single instance of infrastructure. It is not required to hard code the functionality for individual users.
- All users run the same version of the software.

SaaS Implementation

To convert conventional on-premises software into a SaaS solution, Microsoft has identified four maturity levels that design SaaS architecture using one of the key attributes scalability, multi-tenant, efficiency and ease of configuration.

Level 1 (Ad hoc/Custom)

- No Maturity
- Single user, single instance

Level 2 (Configurability)

- Configuration Metadata, detailed configuration
- Separate instances of the same application
- Ease in maintenance (Update common code base

Level 3 (Multitenant Efficiency)

- Single instance for all users
- Efficient use of server resources
- Limited use

Level 4 (Scalable)

- Multitier architecture supporting load balancing across servers
- System capacity dynamically scaled up or down

Advantages and Disadvantages of SaaS

Advantages of SaaS

- Streamlined administration
- Automated update and patch management services
- Data Compatibility
- Enterprise-wide Collaboration
- Global Accessibility

Disadvantage of SaaS

- Security of your information or data is always a point of concern in cloud computing.
- The on-premises software applications provide a higher degree of control when compared to the hosted software application.
- SaaS customers are totally dependent on the internet to access their licensed applications.