

SaaS application Software Development Lifecycle



These are the steps to consider when defining a SDLC for a SaaS application:

1. Envisioning

During the envisioning phase, the company leadership will identify new business opportunities, how to upsell to existing customers, how to expand the customer base. They will strategize to extract more value from their intellectual property. Envisioning of a SaaS service is not that radically different from the traditional software envisioning phase. Business leaders will define the vision and scope of the SaaS service while keeping the previously described cloud service tenets in the background.

Some deliverables this phase involves are: long term services vision and investment areas, near term scope of the service, return on investment, resource allocation for the feasibility study. Some tools you'd use/setup to facilitate it are: Gantt chart, Program Evaluation Review Technique (PERT)

2. Performance

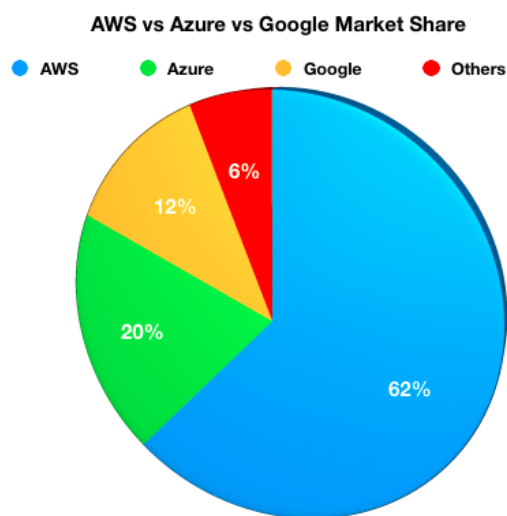
First, you need to assess the scale of the project from a business perspective. Everything should be discussed with investors, managers, marketers, and architects.

SaaS development requires an explicit list of activities that focus on the cloud provider selection.

This evaluation phase will also help in the identification of a cloud service provider for the current service in question. Architecture proof points will be intersected with a cloud provider's platform capabilities in arriving at the decision of "fit for purpose".

The principal elements to consider for almost every company are as follows:

- Security
- Compliance
- Architecture
- Manageability
- Service Levels
- Support
- Costs



Some deliverables this phase involves are:

Cloud platform comparison that includes economics, capability, supportability, security and compliance. Also this comparison from the operations perspective should include: reliability, availability, scalability, performance and disaster recovery

Refined architecture that can be implemented on the selected cloud platform

Updated plan for next phase

POC results encompassing both functional as well as non-functional aspects of the prospective service (you can use any of the cloud platforms you are evaluating)

3. Planning

The planning phase involves making all decisions that are significant for the SaaS project, which will further affect its implementation.

You should also plan the project and develop a roadmap. A risk mitigation strategy is another important area at this stage.

This phase is focused on these deliverables:

Feature requirements for the current service iteration
Project plan for the current iteration
Resource plan
Solution/technical architecture
Design specifications
Development Plan
Operation Monitoring plan

At this time some tools can facilitate tasks are JIRA or Azzure.

4. Subscription

The next step is to subscribe to your chosen cloud provider. At this stage, the final decisions on architecture and pricing are made. This phase also provides backups and possible disaster recovery.

So in this phase some deliverables are:

Backup and recovery strategy
Disaster recovery strategy
Subscription management strategy
Production support strategy

5. Development

Development is the most time-consuming stage, but it is impossible to proceed to it until the previous ones are completed. At this stage, the development environment is set up, testing is carried out, functionality and security policy are added. Also, issues related to synchronization and testing of support services are being resolved.

In this phase the team delivers:

Refined architecture collateral
Refined iteration plan
User documentation
Support documentation
Service deployment model
Fully tested service deployment package

And some tools are required like: Agile methodology / Scrum, development tools like IDEs (IntelliJ, Visual Studio Code), project management tools like Jira, Azzure. / CI / CD platforms like Azzure, Gitlab, Database clients, etc.

6. Operations

This phase is worth checking all the key features of the product and how well the employees work with it. You may have to make additional improvements and improvements, fix bugs, and re-check the system.

This phase requires some deliverables like:

Capacity plan

Load test results

Backup and recovery test results

Disaster Recovery test results

Service discovery collateral

Training plan

Support plan

Production service deployment

References

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