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# Technology Approach @ Anshinsoft

## - A Whitepaper

Anshinsoft boasts of a technology organization nurtured around agile methodologies. We follow and encourage software engineering principles that add value not only to our internal project delivery team, but also has a direct impact on the value proposition that we offer to our clients. We believe in close collaborative working models with our clients, focus on delivering quality software that has passed through the rigor of our well-engineered QA process chain. Our delivery process is centered around a distributed model that automates the build, test and release cycles using some of the latest technologies.

In this document we discuss some of our approaches towards software engineering and the technology stacks that we have been using in Anshinsoft since the last eight years.

### 1. Software Engineering Principles

Anshinsoft's software delivery process follows a lifecycle that's a uniform standard across the organization. The following are the main stages of the SDLC:

- a. Initiation
- b. User Stories
- c. Developer Stories
- d. Release Planning
- e. Development
- f. Model Testing
- g. Small Releases

We follow agile principles in our iterative delivery cycle and work in close collaboration with our clients. We deliver in small release cycles and improve upon the quality of the software through a feedback loop which the client provides. Hence every stage of our SDLC has a review loop with the major stakeholders of the process. The following is a diagram that illustrates this:

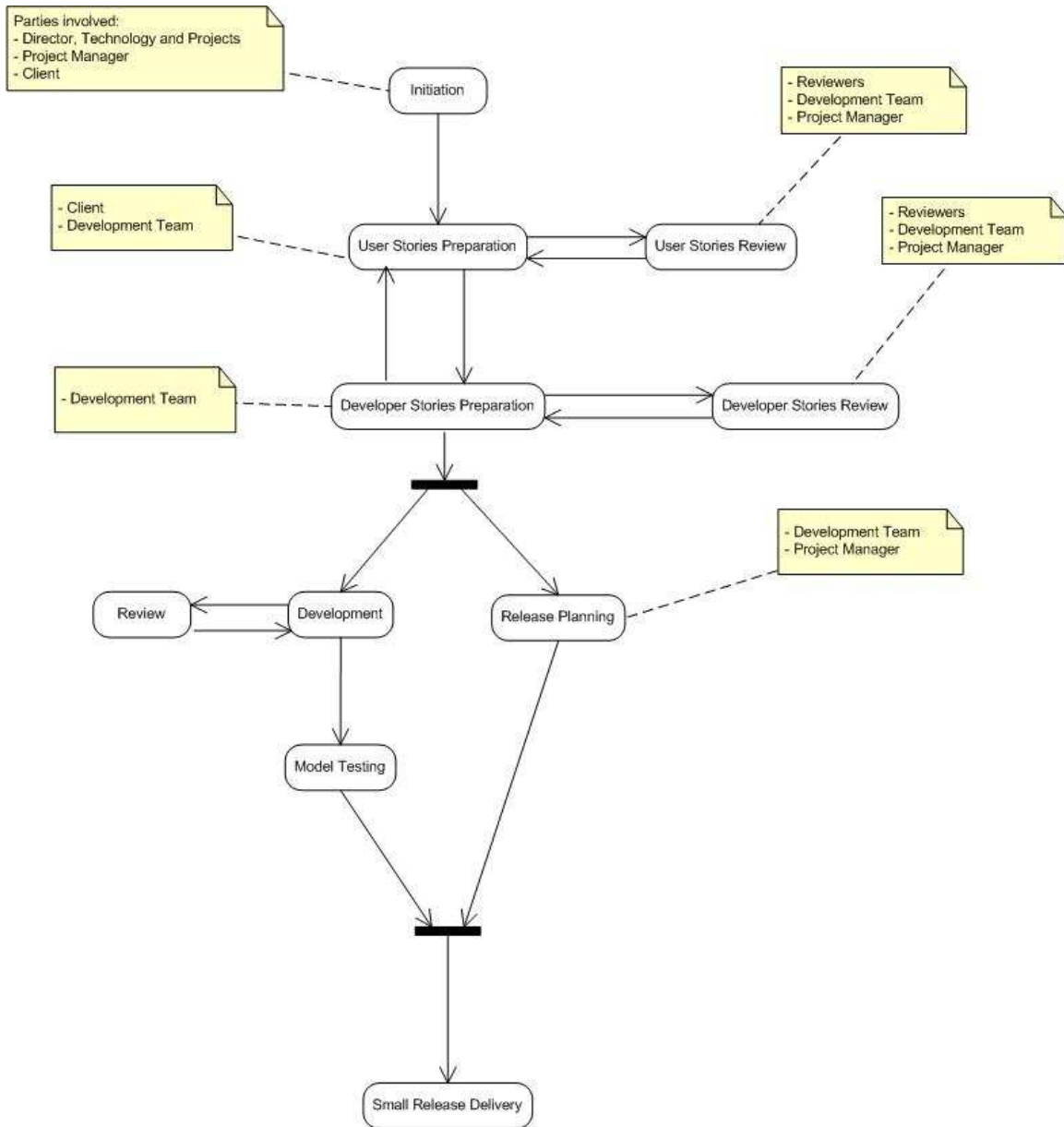


Figure 1 - SDLC @ Anshinsoft

## 2. Technology Stack that we Work on

Anshinsoft's technology organization works on the following stacks for delivering software to its clients:

### 2.1. Java and Java EE stack

We deliver enterprise scale Web applications to our clients that run on the Java EE stack. The systems that we architect, design, develop and deliver are primarily based on the following infrastructure components:

- Java SE
- JMS
- JDBC
- JMX
- Servlet containers
- Application servers
- Web servers
- Service oriented architectures using REST based paradigms

We are a big proponent of the open source platforms and have been using open source software right from our inception. While developing enterprise solutions in the capital market space we have used the following components:

- Apache Jakarta projects
- Tomcat
- Spring
- Hibernate
- Guice

## **2.2. Microsoft .NET and CLR**

We have been working on projects on the .NET platform since the last 6 years. Our expertise in the .NET stack includes:

- C# 2.0 / 3.0
- ASP.NET
- ADO.NET

## **2.3. Relational Databases**

- Oracle
- MySQL
- SQL Server

## **2.4. NoSQL Databases**

- MongoDB
- Redis
- CouchDB

## **2.5. *Newer Programming Languages & Frameworks***

These include:

- Ruby and Rails
- Groovy and Grails
- Scala and Lift

## **2.6. *Web 2.0 Practice***

- Drupal and Php
- Oxid

## **3. Newer Technology Initiatives**

At Anshinsoft we do explore the frontiers of the technology paradigms that have the potential to dynamic growth. Keeping in mind the recent surge in interest towards Grid computing, scalability and developing applications for the cloud, we have been working on some of these initiatives both as internal projects and as client engagements. The following is a list of technology areas which we have been actively pursuing in recent times:

### **3.1. *Grid Computing using Terracotta***

In order to make a Java based application scalable we have worked on integrating some parts of our capital market solutions on Terracotta in-memory data grid. We implemented some of the patterns of distributed computing like Master/Worker that can lead to improving scalability of a Java EE application.

### **3.2. *Deployment on the Cloud***

Anshinsoft has developed software that has been running on the Amazon EC2 instances since the last 6 months. It has been developed using Groovy and Grails on MySQL instances and have been deployed on the cloud.

## **4. Testing and QA Process**

At Anshinsoft we do various levels of testing before the software gets out of the door. They are:

- Unit testing, done by the developers using automated frameworks like JUnit, TestNG and ScalaTest
- Functional testing of modules, done partly by the developers and partly by the QA team

- Integration testing, done entirely by our QA team

We have a dedicated team of QA professionals trained in automated test tools that we use for doing functional, integration and regression testing. We use QTPPro for our integration and regression tests.

## **5. Knowledge Management & Knowledge Sharing**

At Anshinsoft we believe in the philosophy of development through proactive knowledge dissemination. Every new recruit in our technology force has access to a rich knowledge-base (KB) of technology and domain artifacts. The KB is hosted on a wiki and gets enriched on a regular basis through contributions from domain experts.