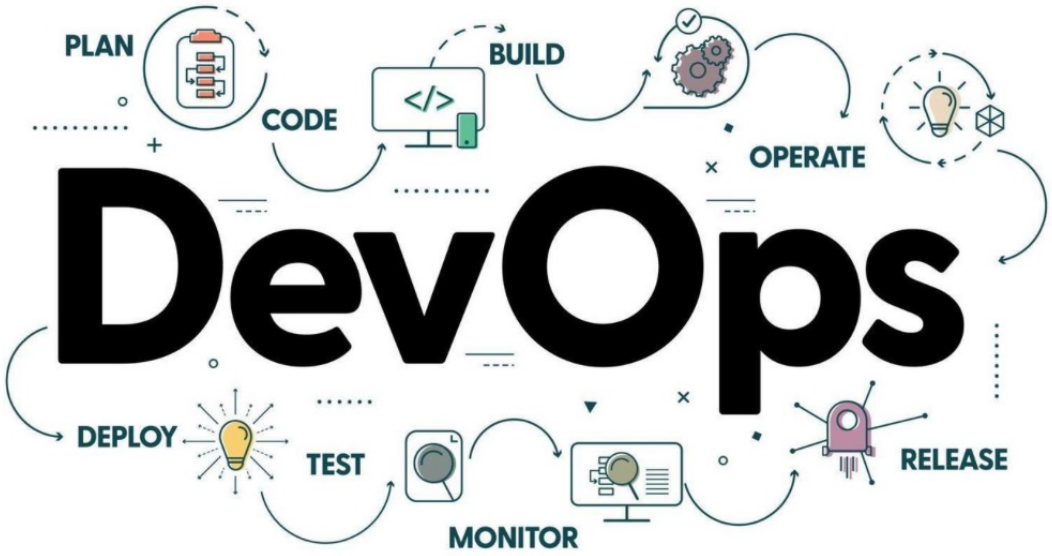


Deployment Strategies

Jahangir Shaik

Basic Deployment

Basic deployment simultaneously updates newer version on every node or instance in the target environment

PROS

- Fast
- Simple
- Cost effective

CONS

- Outage vulnerability
- Difficult to rollback

Rolling deployment involves in replacing instances of previous version, one after other, in a sequence till all instances are updated with newer version; Also, sometimes known as ramped deployment

PROS

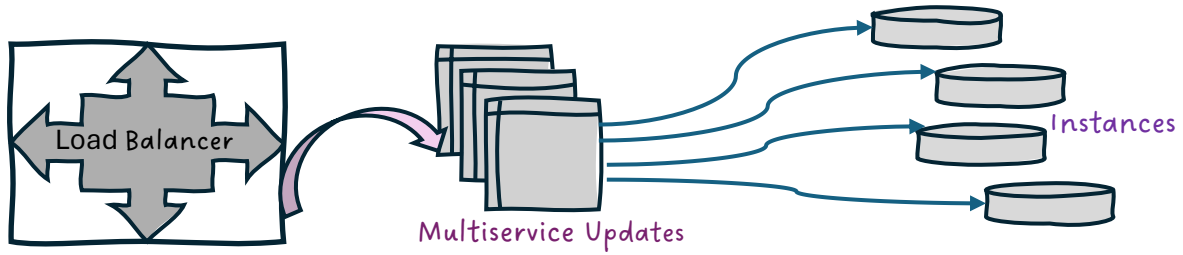
- Flexible
- Minimum downtime
- Flawed deployment impacts less users

CONS

- Slow rollback
- Requires Backward compatibility

Rolling Deployment

Multi-service Deployment



Multi-service deployment simultaneously updates every node in the target environment with multiple services; Similar to basic deployment but mostly applicable for services

PROS

- Fast
- Simple
- Cost effective

CONS

- Outage vulnerability
- Difficult to rollback

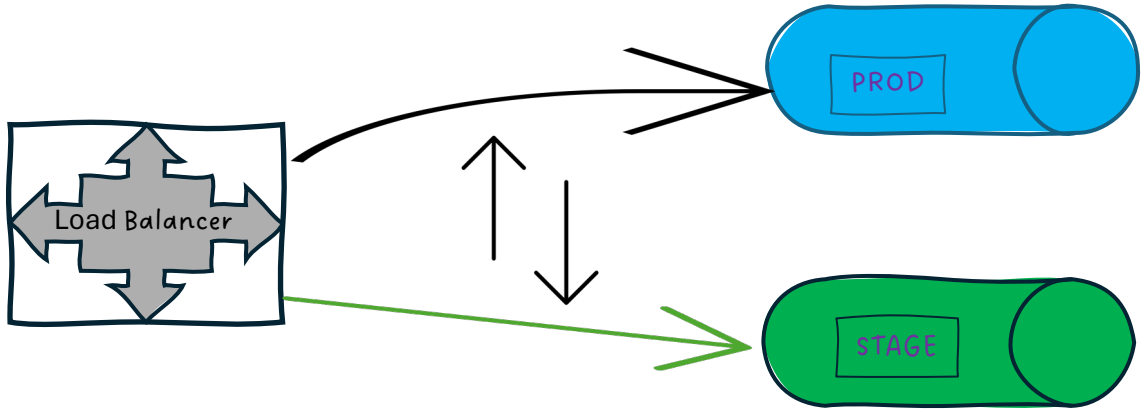
Blue-green deployment is a release method that has two different but identical environments wherein one environment is updated with newer version and when testing is complete, traffic is switched from older version environment to newer, updated environment

PROS

- Instant rollout / rollback
- Minimum downtime
- Zero versioning issues

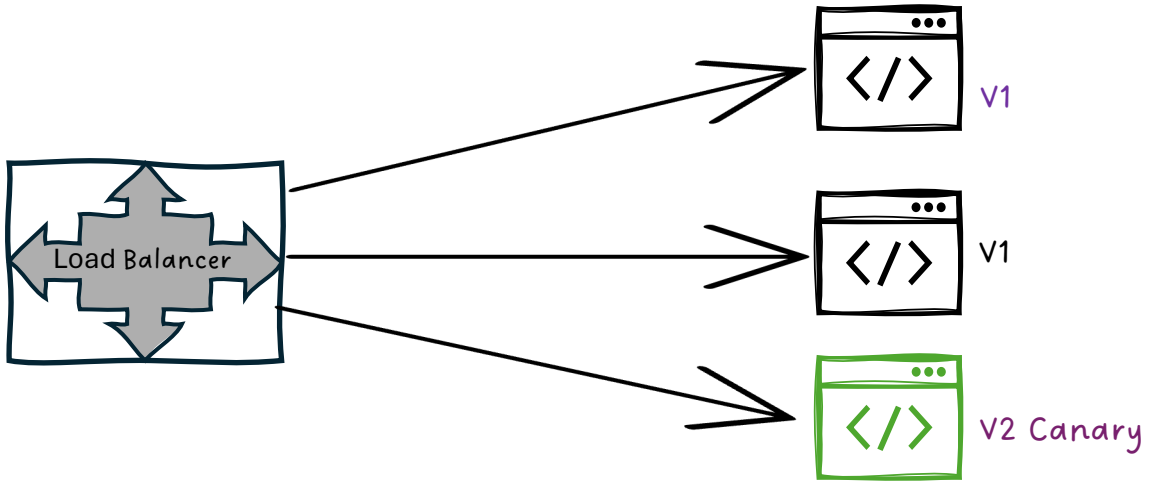
CONS

- High cost
- Difficult to scale
- Distorted user transactions



Blue Green Deployment

Canary Deployment



Canary deployment updates an app or service in increments. Initial update is rolled out to small subset of users, and it is gradually increased in the scope of users till it reaches 100%

PROS

- Minimum downtime
- Fast rollbacks
- Allows test and live updates

CONS

- Slow rollout
- Release increments take time
- Requires High observation

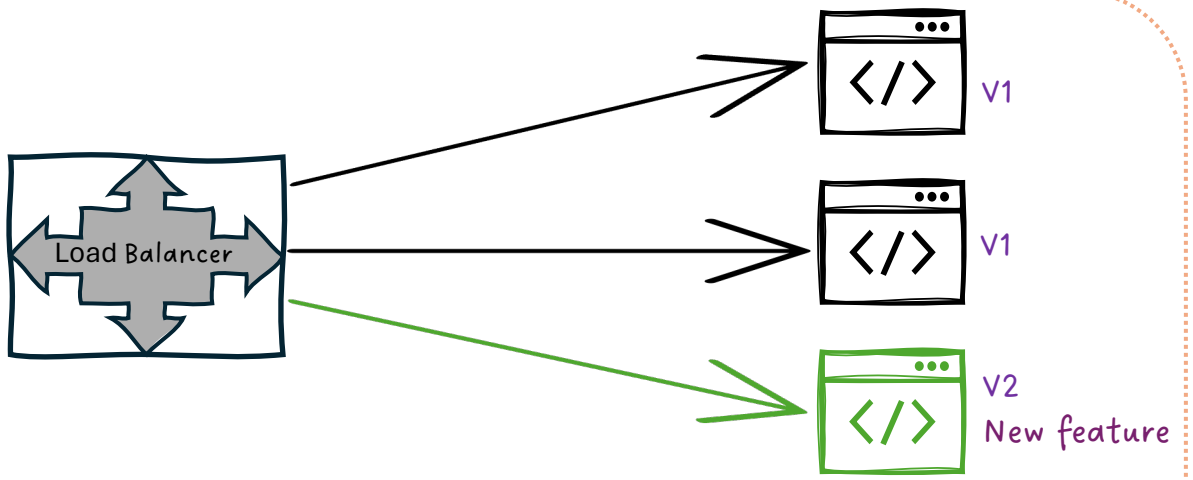
Dark launching process allows production ready release features to a small user group without exposing to rest of userbase until they are ready

PROS

- Gain feedback
- Minimize risk
- Safe & fast transition
- Run experiments

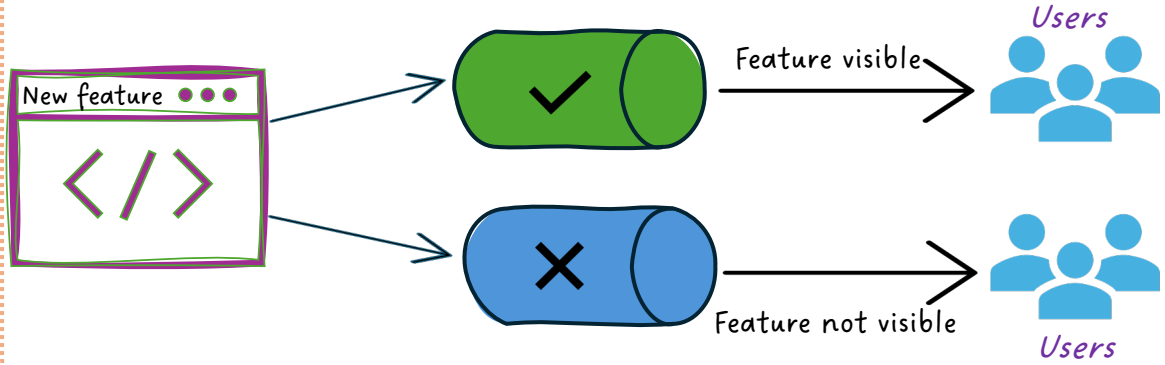
CONS

- Large setup timeframes
- High cost of implementation



Dark Launch Deployment

Feature toggle Deployment



Feature toggle deployment allows a service, function or feature to be hidden, enabled or disabled during runtime for a particular group of users while other users don't notice any impact

PROS

- Rapid feedback
- Unfinished feature can be deployed

CONS

- High cost of implementation
- Impacts User experience

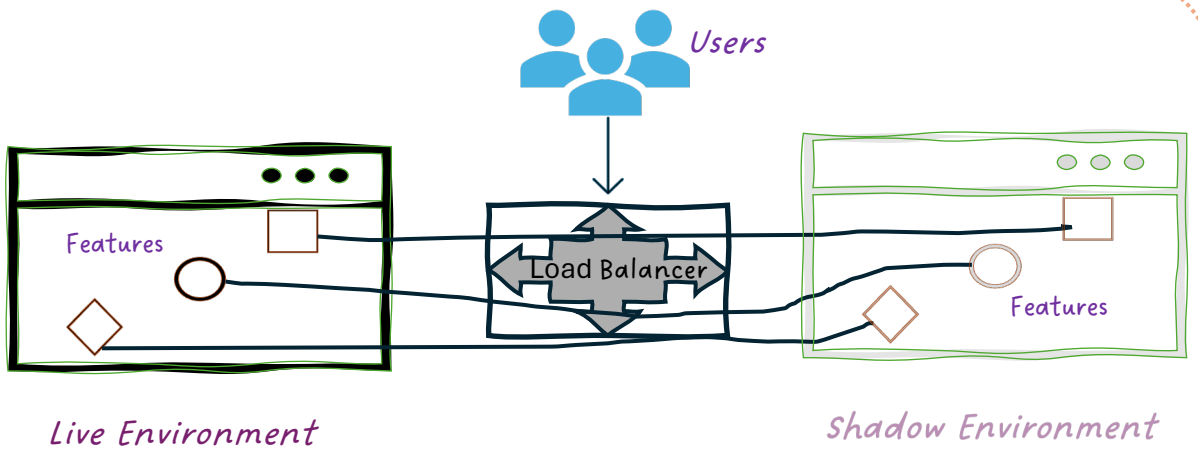
Shadow deployment follows a process wherein app or service changes are deployed in a parallel environment that mimics the production environment. The deployed changes are not visible to the end-users, hence the term "shadow"

PROS

- Efficient scaling
- Real world testing
- Risk mitigation

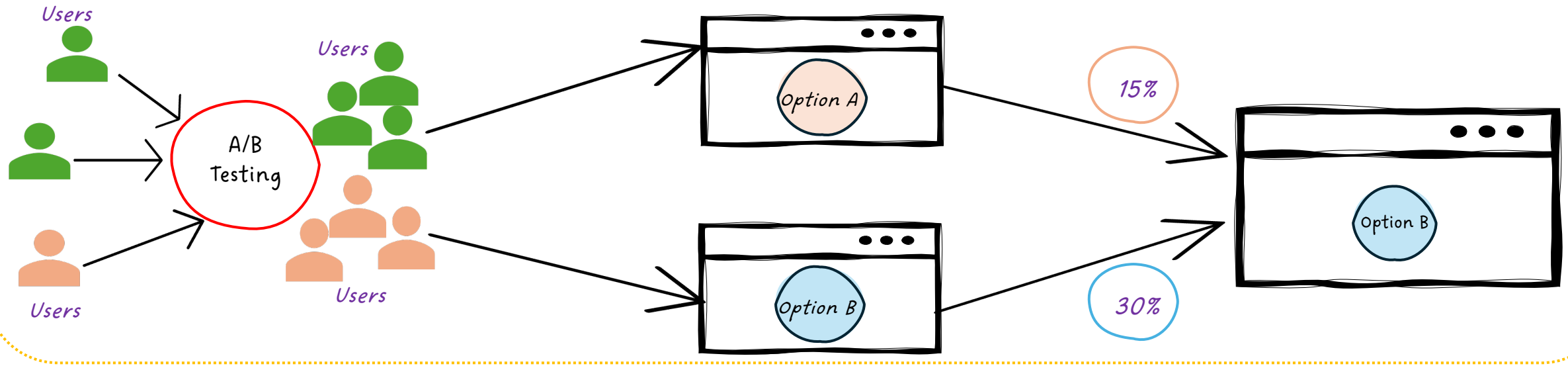
CONS

- High cost of implementation



Shadow Deployment

A/B Test Deployment



A/B test Deployment involves measuring functionality of two versions by collecting real time data. While not strictly a deployment strategy, it's a testing approach that builds on the canary deployment strategy. A/B testing allows organizations to take informed business decisions

PROS

- Experimentation
- Exploration
- Traffic routing based on business need

CONS

- High cost of maintenance
- May negatively impact user experience

”

Thank you