

# Deployment Strategies

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## 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

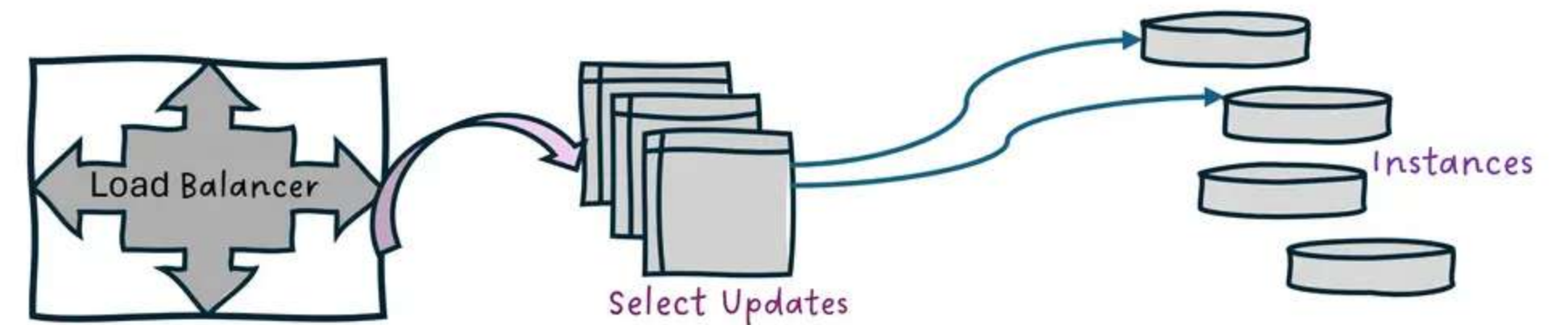
Rolling deployment involves in replacing instances of previous version, one after other, in a sequence till all instances are updated with newer version; Also, sometimes known as ramped deployment

### 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

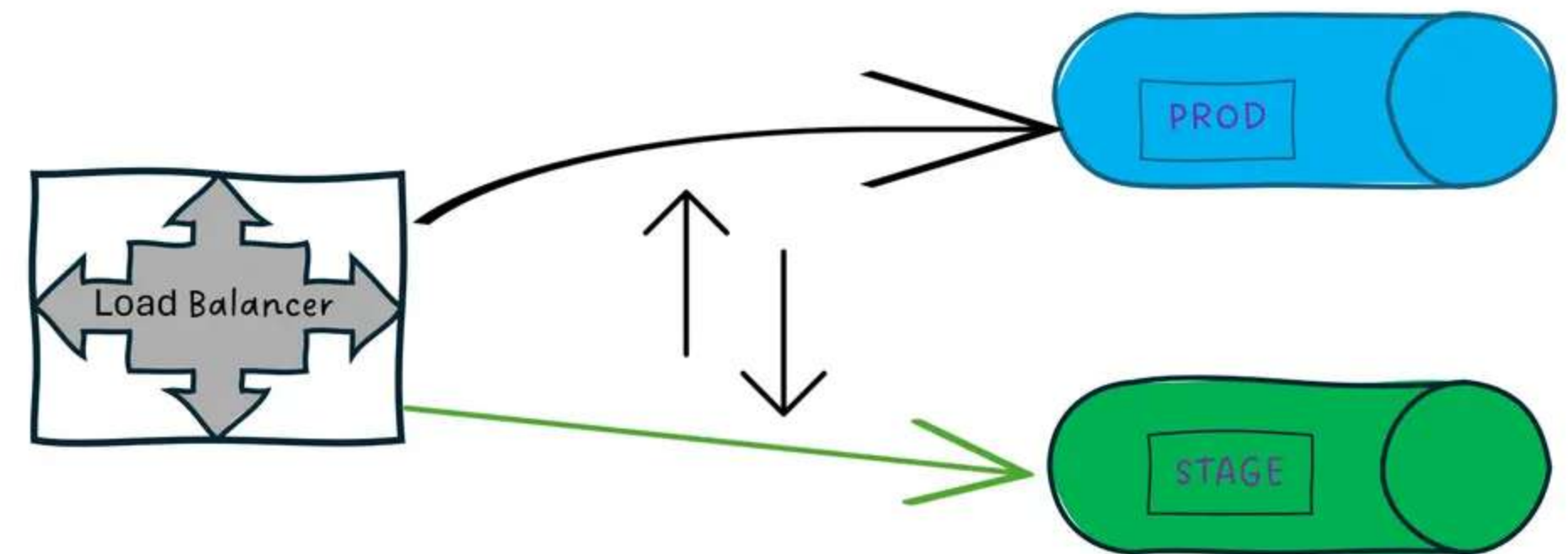
**Blue-green deployment** is a release method that has two different but identical environments wherein one environment is updated with newer version and when testing is complete, traffic is switched from older version environment to newer, updated environment

### PROS

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

### CONS

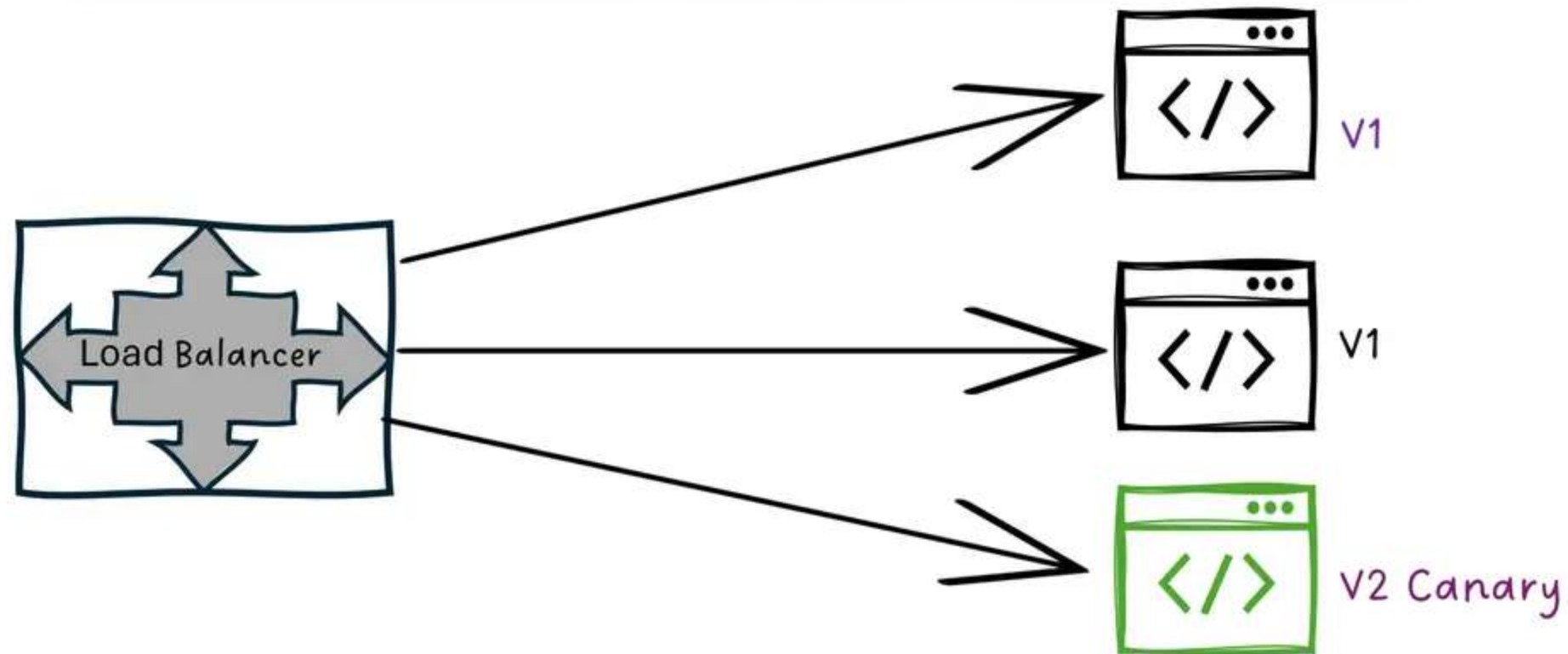
- High cost
- Difficult to scale
- Distorted user transactions



## 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

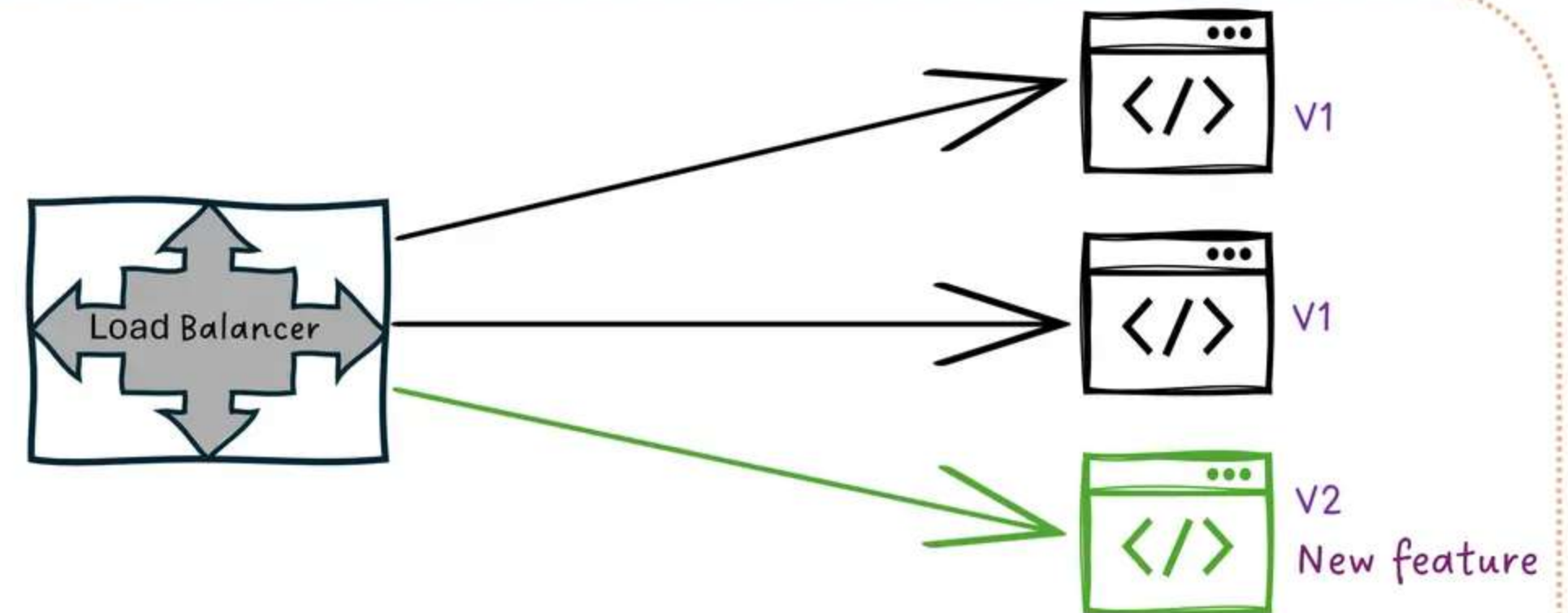
Dark launching process allows production ready release features to a small user group without exposing to rest of userbase until they are ready

### PROS

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

### CONS

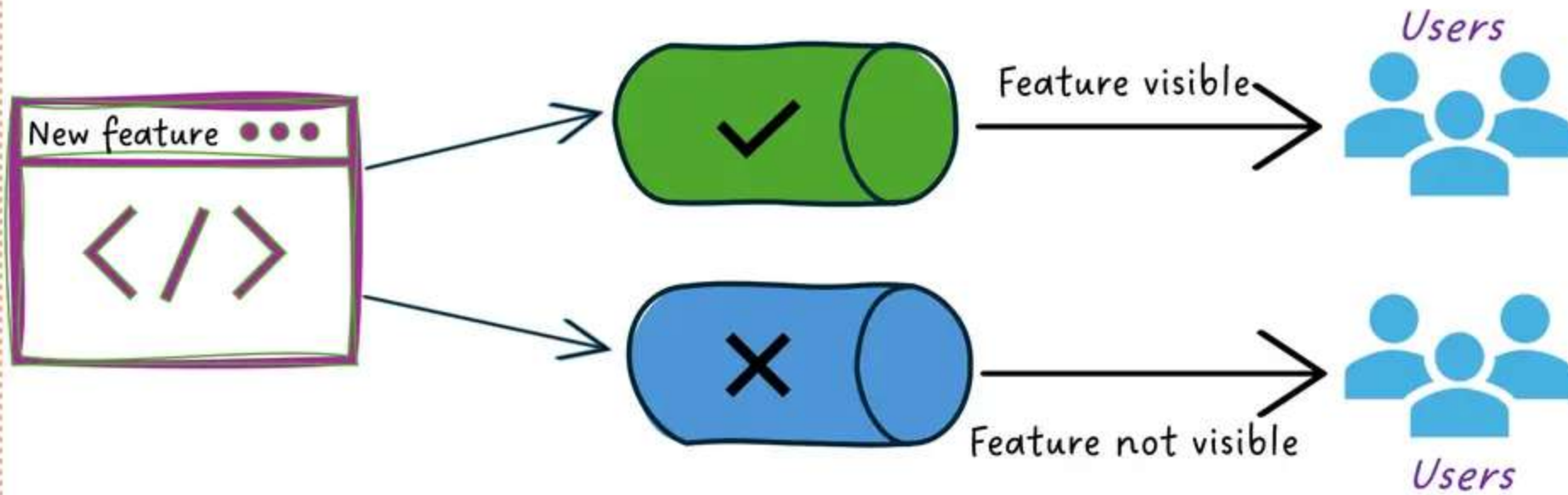
- Large setup timeframes
- High cost of implementation



## 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

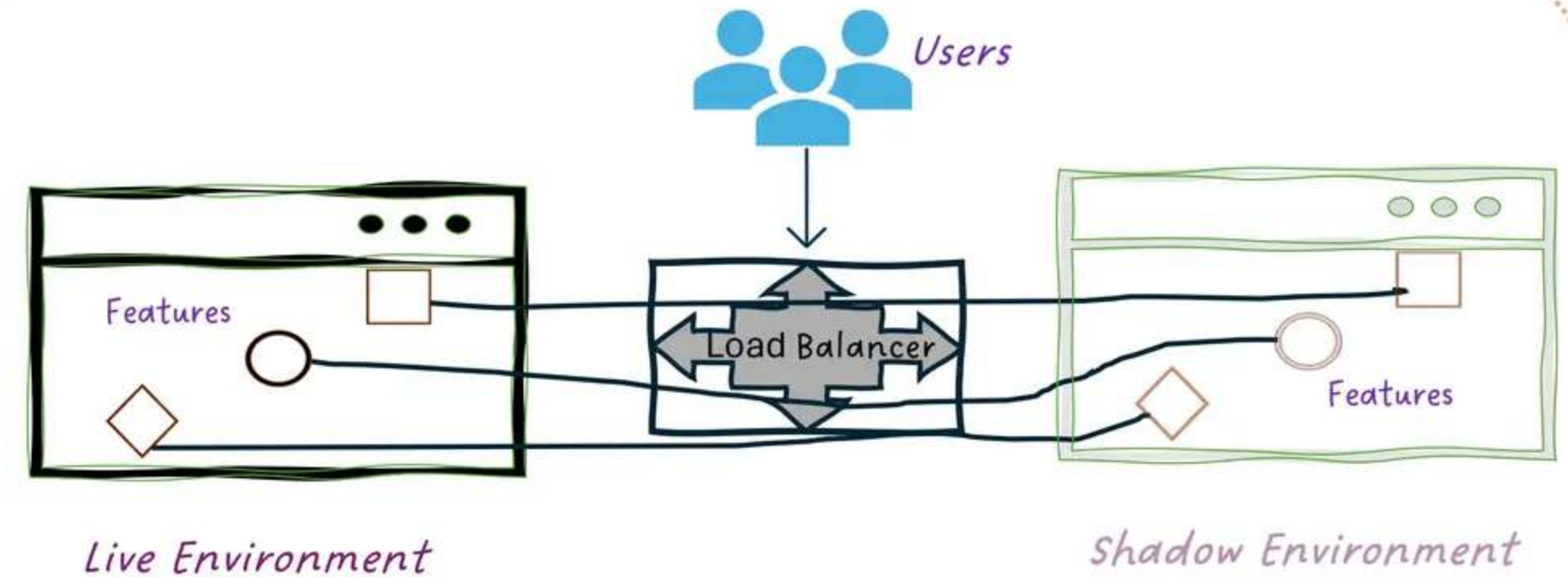
Shadow deployment follows a process wherein app or service changes are deployed in a parallel environment that mimics the production environment. The deployed changes are not visible to the end-users, hence the term "shadow"

### PROS

- Efficient scaling
- Real world testing
- Risk mitigation

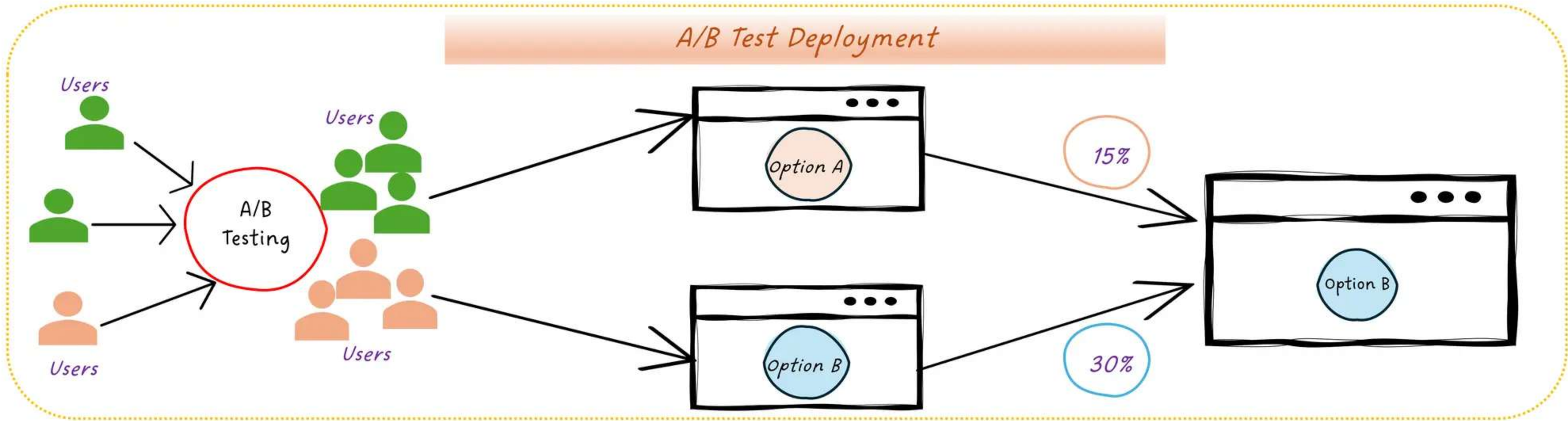
### CONS

- High cost of implementation



## Shadow Deployment





A/B test Deployment 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



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Thank you