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# BENEFITS OF CI/CD

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## OVERVIEW

### WHAT IS CI/CD

Continuous delivery and Continuous deployment

### CURRENT PRODUCT DELIVERY MODE

The big bang deployment

### BENEFITS OF CI/CD

Reduce cost, avoid cost, increase revenue and protect revenue.

### Migrating to CI/CD

Expected challenged, conclusion.



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## WHAT IS CI/CD

### CI/CD

- Stands for continuous integration and continuous delivery
- CI/CD enables teams to produce and release value in short cycles by automating some of application development stages
- Production and releasing of value in short cycles is called continuous delivery.

### Continuous Integration (CI)

- An engineering practice of automating the integration code changes from multiple developers' into a central repository .

### Continuous Deployment (CD)

- An engineering practice of delivering value frequently through automated deployments.



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## CURRENT PRODUCT DELIVERY MODE

### Big bang deployment

- Involves replacing live production version with new production version.

### Pros of big bang deployment

- Simple to understand and perform

### Cons of big bang deployment

- Downtime while replacing live production version with new production version.
- Encourages teams to batch up their changes until the deployment is large enough to justify the costs.
- Require more testing and coordination.
- Features go to market very slowly.



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## BENEFITS OF CI/CD

### **Reduces costs**

- CI/CD reduces developer time on issues from new developer code by catching compile errors on merge thus reducing development cost.

### **Avoid costs**

- CI/CD is able to catch unit test failures thus avoiding cost for testing and bugs in production.
- CI/CD detect security vulnerabilities thus preventing embarrassing or costly security holes.

### **Increase revenue**

- CI/CD enables faster production deployments and deployment without manual checks thus new features are released more quickly.

### **Protect revenue**

- CI/CD enables automated rollbacks when there is a job failure thus returning production to working state.



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## MIGRATING TO CI/CD

### Expected challenges

- Big upfront investment in CI/CD tools.
- Team members will be required to learn CI/CD skills.

### Conclusion

- Though CI/CD comes with a big upfront investment, CI/CD will reduce cost in a long run and it will also improve the developers' productivity.