

DEVOPS:

1. Why Devops?

-->Devops is needed to reduce delays errors and communication gaps btw development and operation team

-->Earlier, development and operations teams worked separately.

Which means:

- 1.Slow software delivery
- 2.More errors in production
- 3.Poor communication
- 4.Frequent failures

DevOps was introduced to remove these problems.

2. What is Devops?

Devops = Development + Operations

-->Devops is a culture and set of practices that helps development and operations teams work together to:

- 1.Build
- 2.Test
- 3.Deploy
- 4.Monitor software efficiently

3. How Devops Works?

-->Devops works by automating and connecting all stages of software delivery.

Flow:

Plan → Code → Build → Test → Deploy → Monitor

- 1.Developers write code
- 2.Automated tools build and test the code
- 3.Code is deployed automatically
- 4.Monitoring tools track performance and errors
- 5.Feedback is given quickly

This process repeats continuously.

4. Devops Benefits

- 1.Faster Software Delivery
- 2.Automation helps release features quickly.
- 3.Better Collaboration
- 4.Developers and operations work as a single team.
- 5.less Errors
- 6.Automated testing and deployment reduce mistakes.
- 7.Quick Problem Detection
- 8.Logs and monitoring find issues early.
- 9.High Reliability
- 10.Systems are stable and easy to rollback.
- 11.Cost Reduction
- 12.Automation saves time and resources.

5. Devops Principles

- 1.Automation
- 2.Automate build, test, and deployment processes.
- 3.Continuous Integration & Deployment (CI/CD)
- 4.Code changes are integrated and deployed frequently.

5.Collaboration

6.Teams share responsibility and communicate openly.

7.Monitoring & Logging

8.Track system performance and errors.

9.Continuous Improvement

10.Learn from feedback and improve continuously