



# 4

Critical metrics  
of DevOps



1

## Deployment frequency

This metric measures how often code changes are deployed to a production environment. It is usually expressed as the number of deployments per unit of time, such as deployments per day, week, or month. A higher DF indicates that the team can quickly and efficiently deliver new features and bug fixes to customers.

$DF = \text{Time period} / \text{Number of deployments}$ .



2

## Lead Time for Changes

This metric measures the time that it takes from when a code change is committed to when it is deployed to production. It reflects the speed and efficiency of the software delivery process. A lower LT indicates that the team can reduce the feedback loop and deliver value faster.

$LT = \text{Deployment time} - \text{Commit time}$



3

## Mean Time to Restore

This metric measures the time that it takes to recover from a failure in production. It reflects the stability and reliability of the software and the team's ability to handle incidents. A lower MTTR indicates that the team can minimize the impact of failures and restore service quickly.

$MTTR = \text{Number of failures} / \text{Total downtime}$

# 4

## Change Failure Rate

This metric measures the percentage of deployments that cause a failure in production. It reflects the quality and reliability of the software and the team's ability to prevent defects. A lower CFR indicates that the team can deliver software with fewer errors and less rework.

$$\text{CFR} = (\text{Number of total deployments} / \text{Number of failed deployments}) \times 100\%$$