Mention some of the core benefits of DevOps.



Technical benefits

- Continuous software delivery
- Less complex problems to manage
- Early detection and faster correction of defects



Business benefits

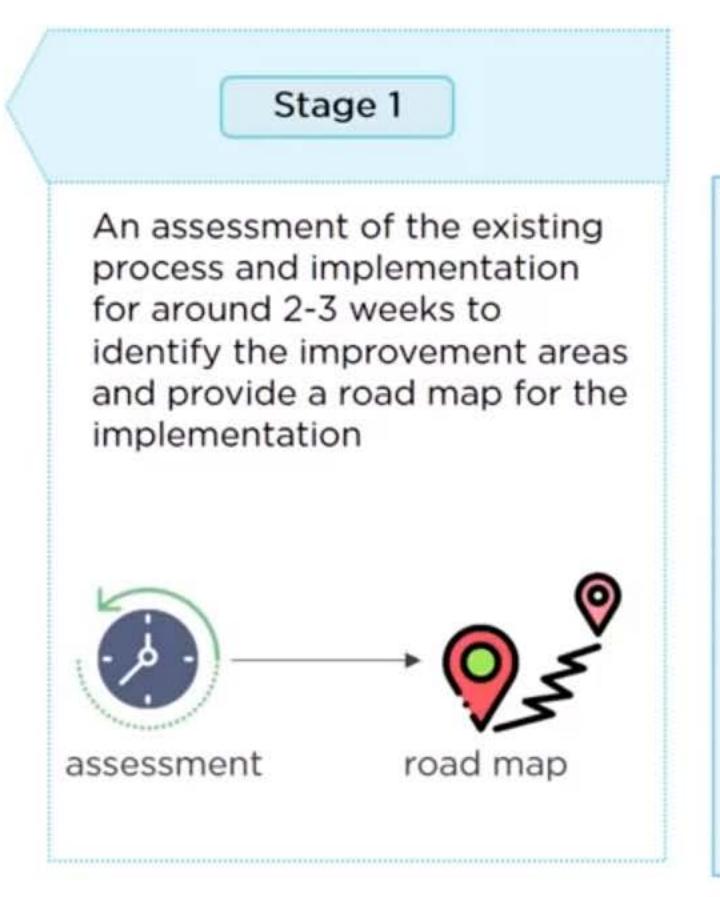
- Faster delivery of features
- Stable operating environments
- Improved communication and collaboration between the teams

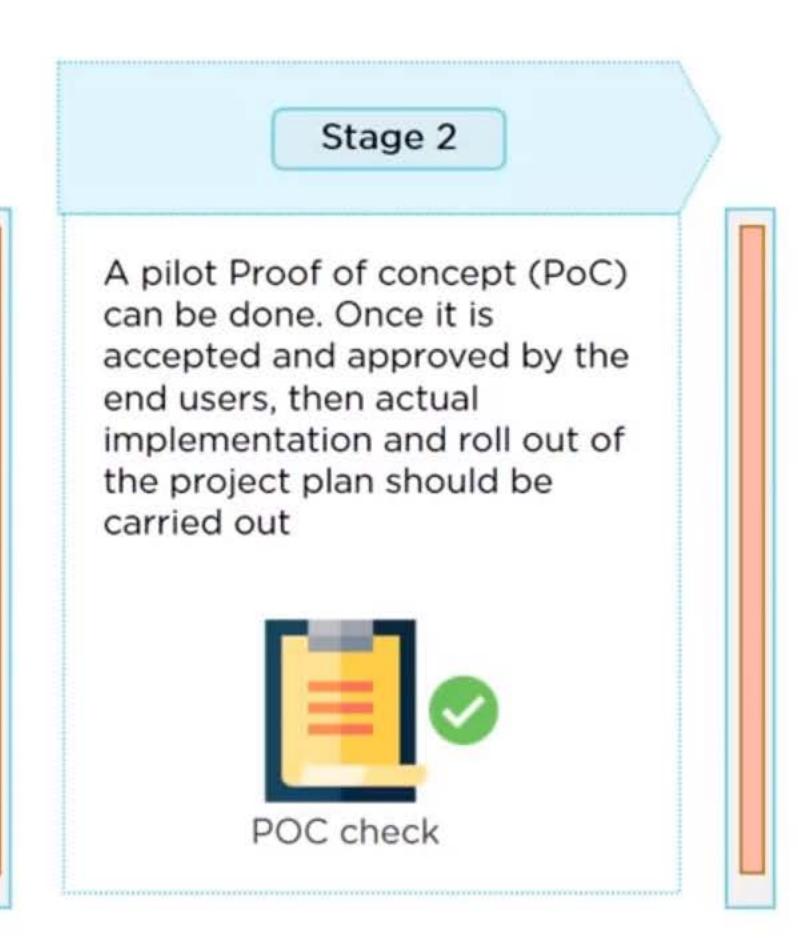




How will you approach a project that needs to implement DevOps?

The following standard approaches can be used to implement DevOps in a certain project:

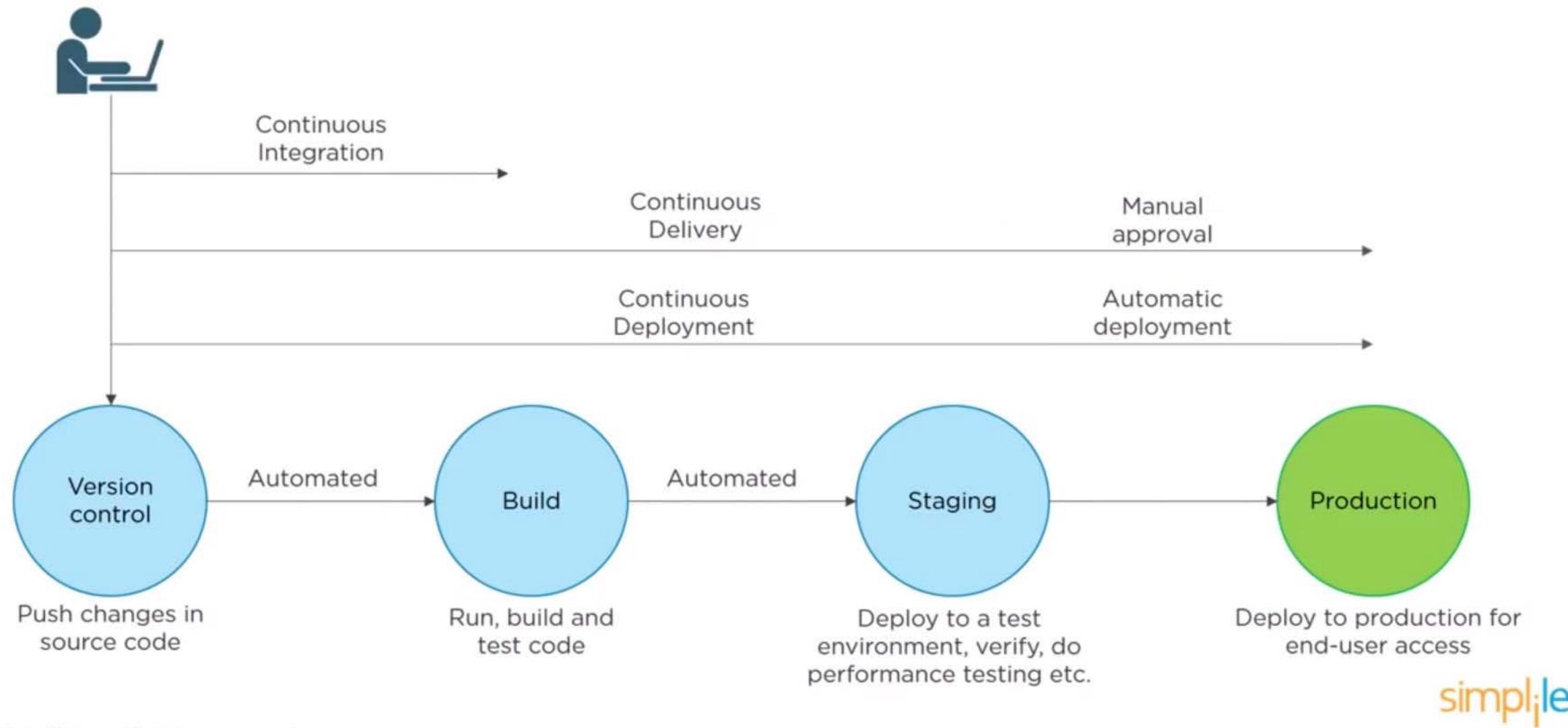








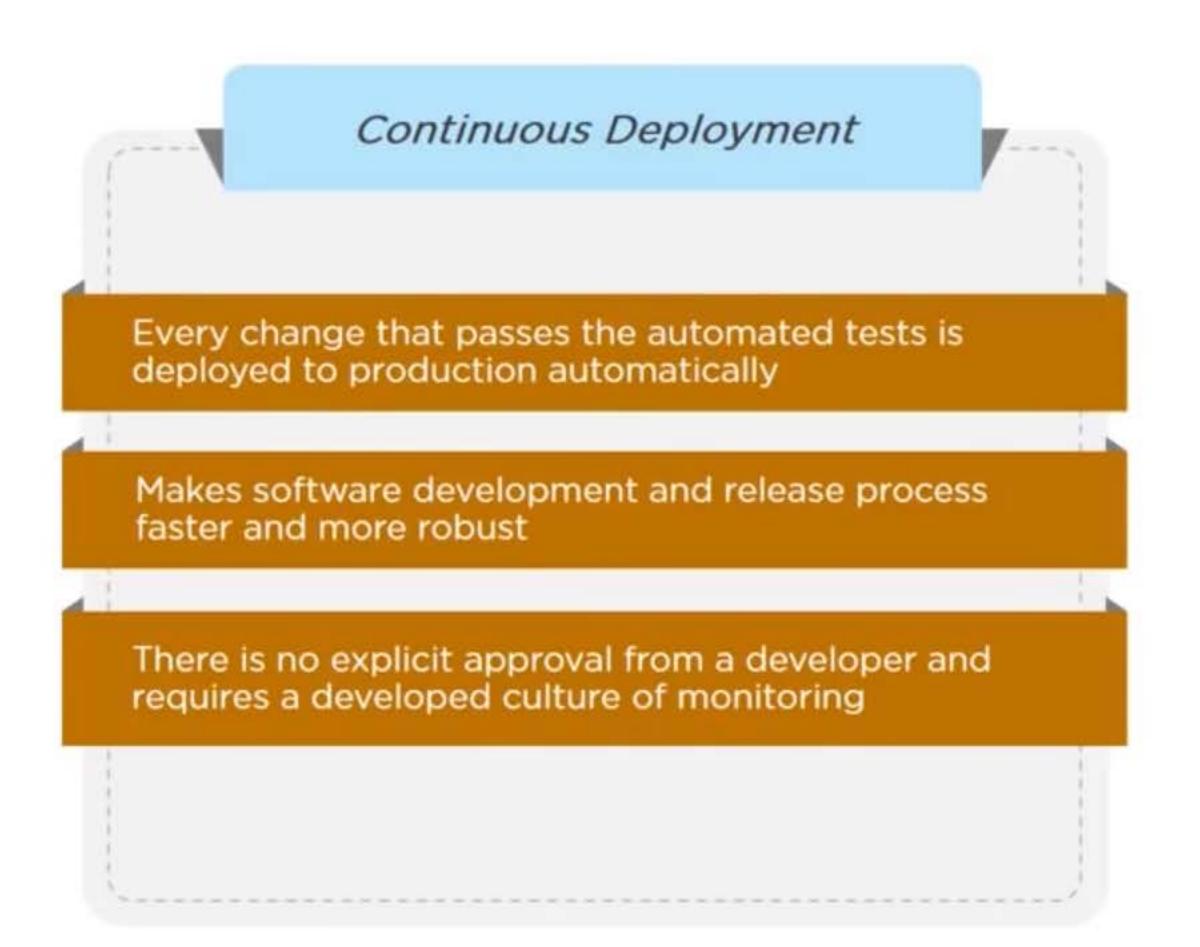
What is the difference between Continuous Delivery and Continuous Deployment?





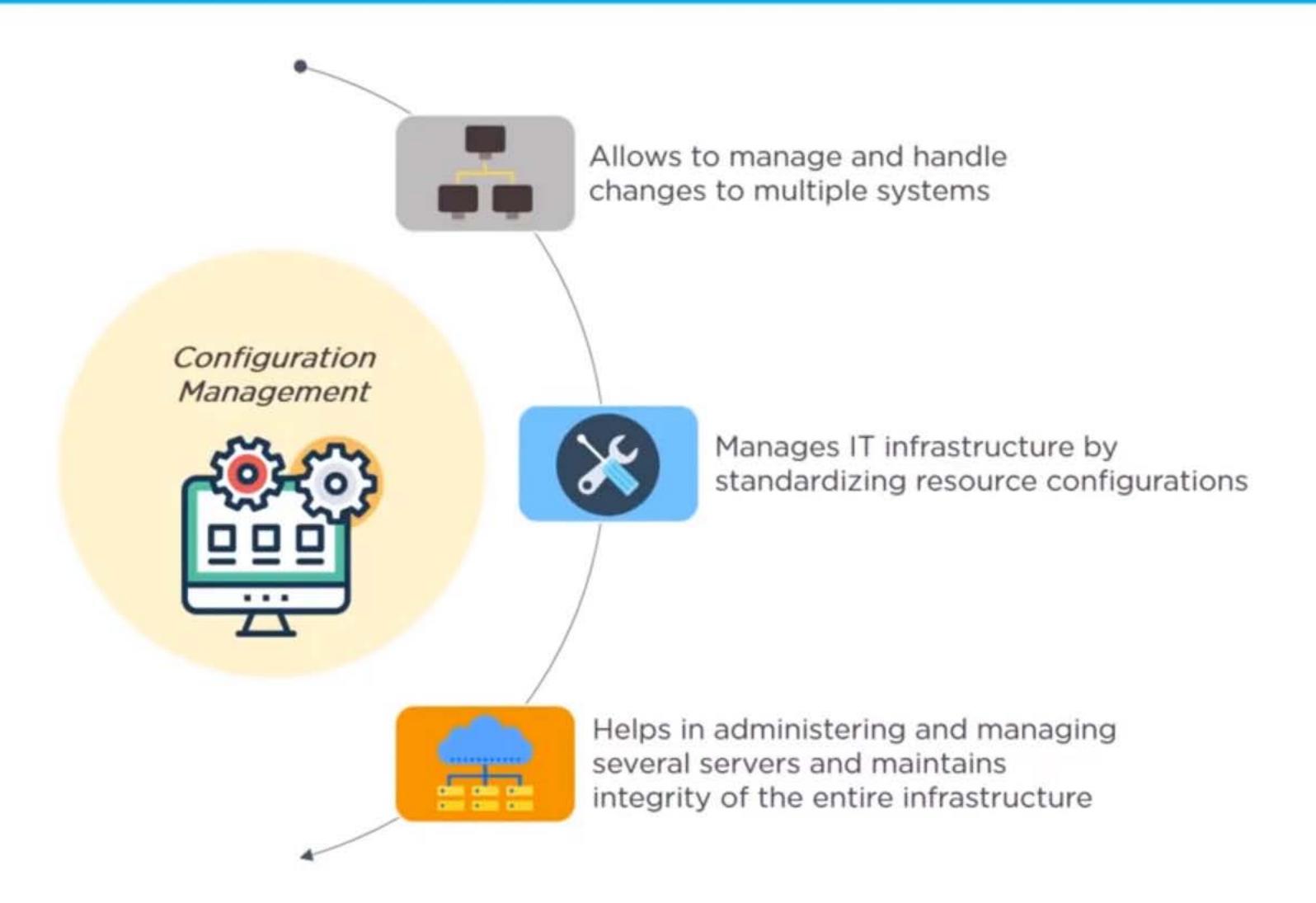
What is the difference between Continuous Delivery and Continuous Deployment?

Continuous Delivery Ensures code can be safely deployed on to production Ensures business applications and services function as expected Delivers every change to a production-like environment through rigorous automated testing





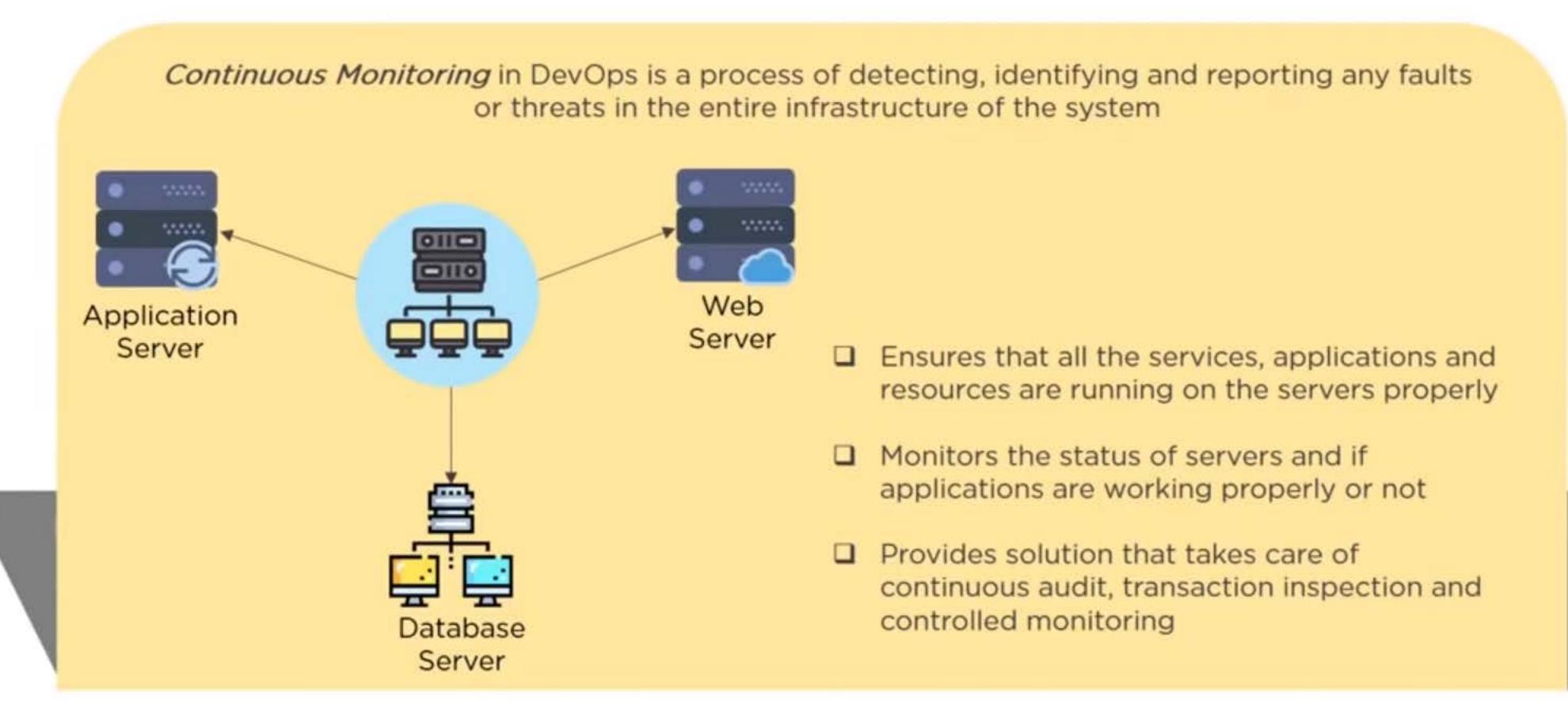
What is the role of Configuration Management in DevOps?







How does Continuous Monitoring help in maintaining the entire architecture of the system?



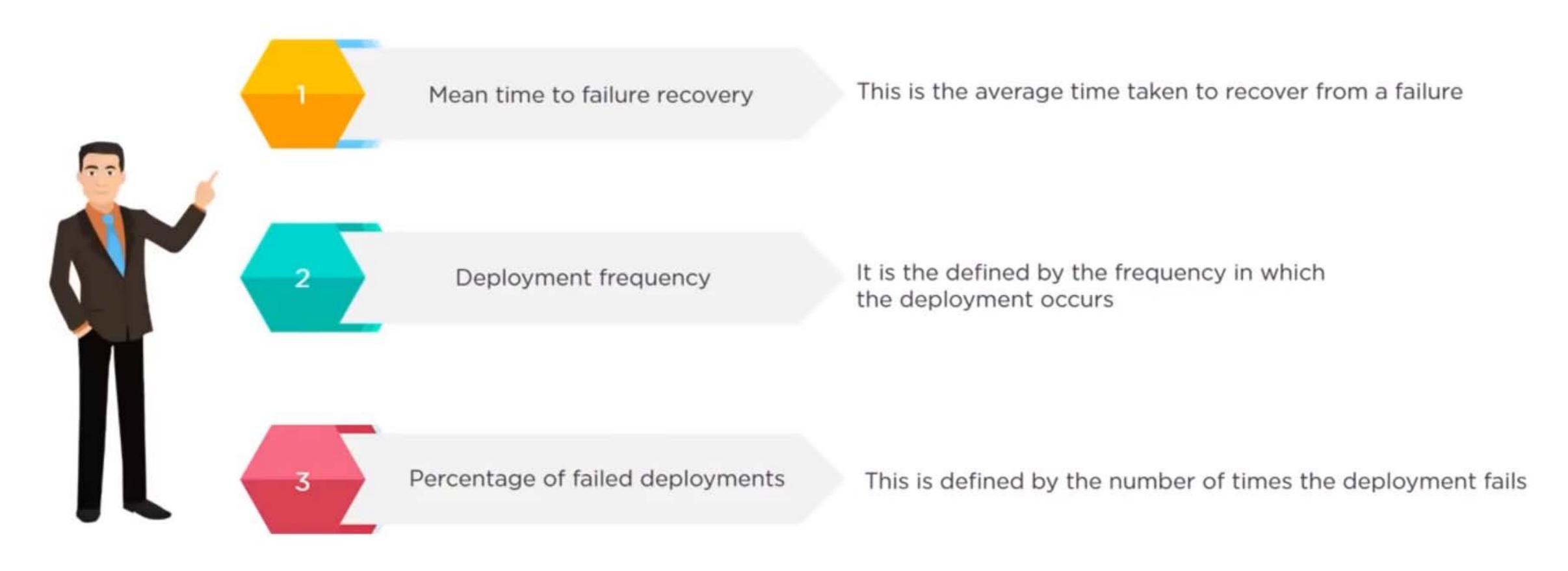


What is the role of AWS in DevOps?

Provides ready to use flexible services without any need to install or Flexible Services setup a software You can manage single instance or scale to thousands using AWS Built for Scale services and compute resources by simplifying provisioning, configuration and scaling aws AWS helps you use automation in order to automate tasks, processes Automation and build faster Using AWS Identity and Access Management (IAM), you can set user Secure permissions and policies AWS supports a large ecosystem of partners which integrate with and Large partner extend AWS services ecosystem



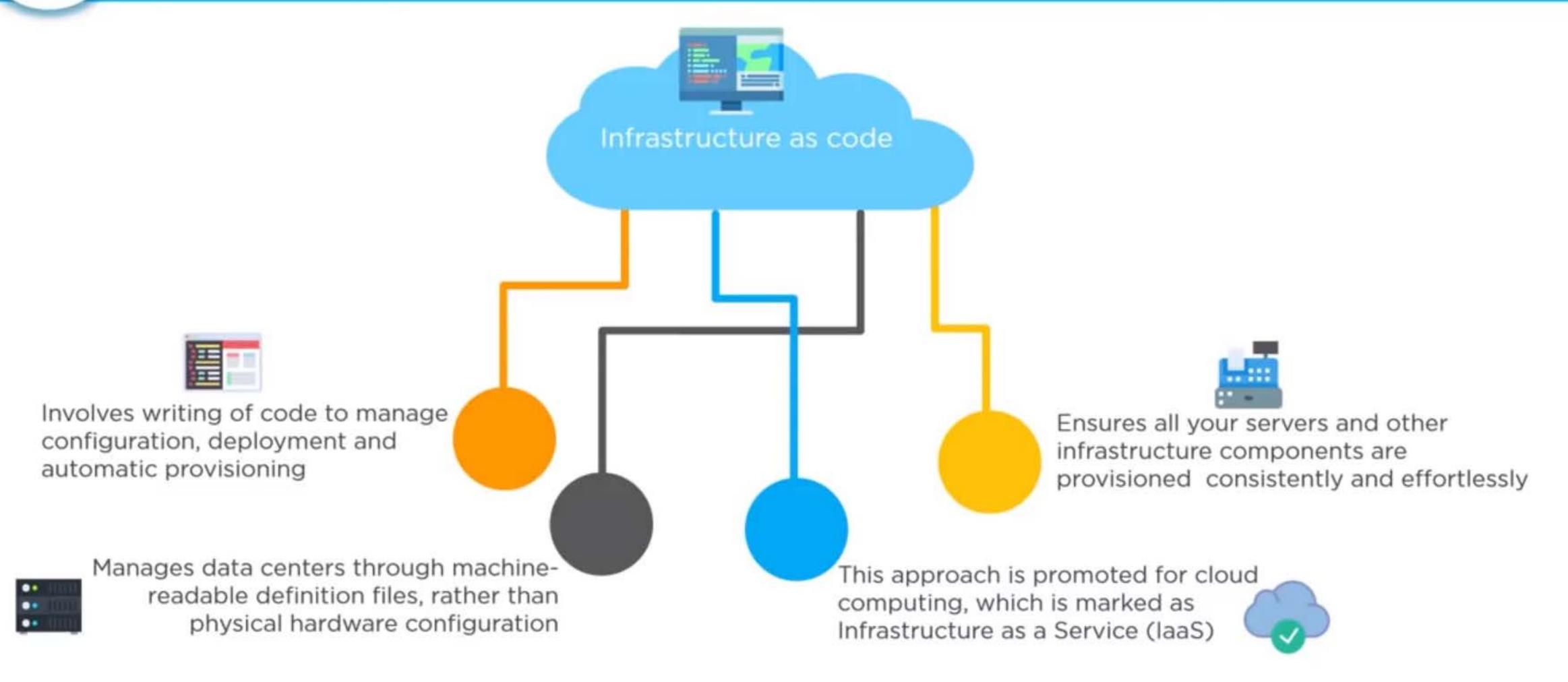
Name three important DevOps KPIs.





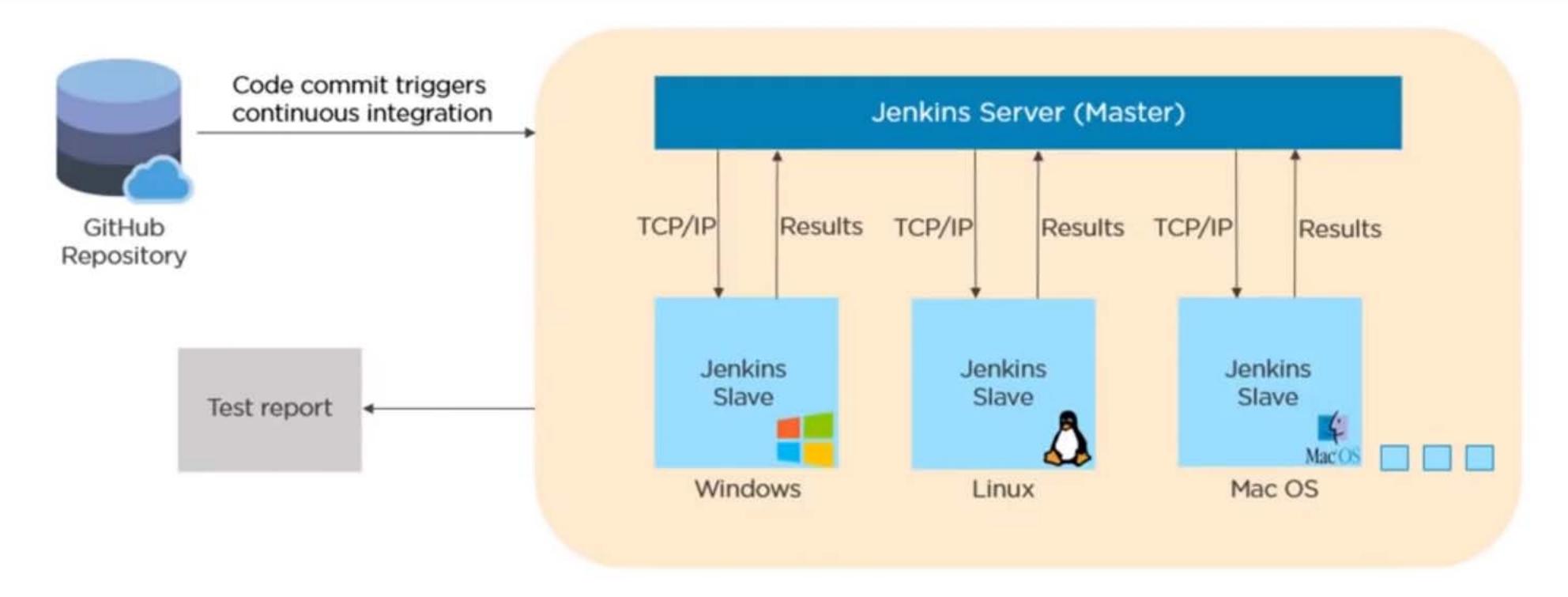
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Explain the term "infrastructure as code" in configuration management.





Explain master - slave architecture of Jenkins.



- Jenkins master pulls the code from the remote GitHub repository every time there is a code commit
- It distributes the workload to all the Jenkins slaves
- On request from Jenkins master, the slaves carry out builds and tests and produce test reports



What is a Jenkinsfile?



It is a text file that contains the definition of a Jenkins pipeline and is checked into source control repository



Allows code review and iteration on the pipeline



Permits audit trail for the pipeline

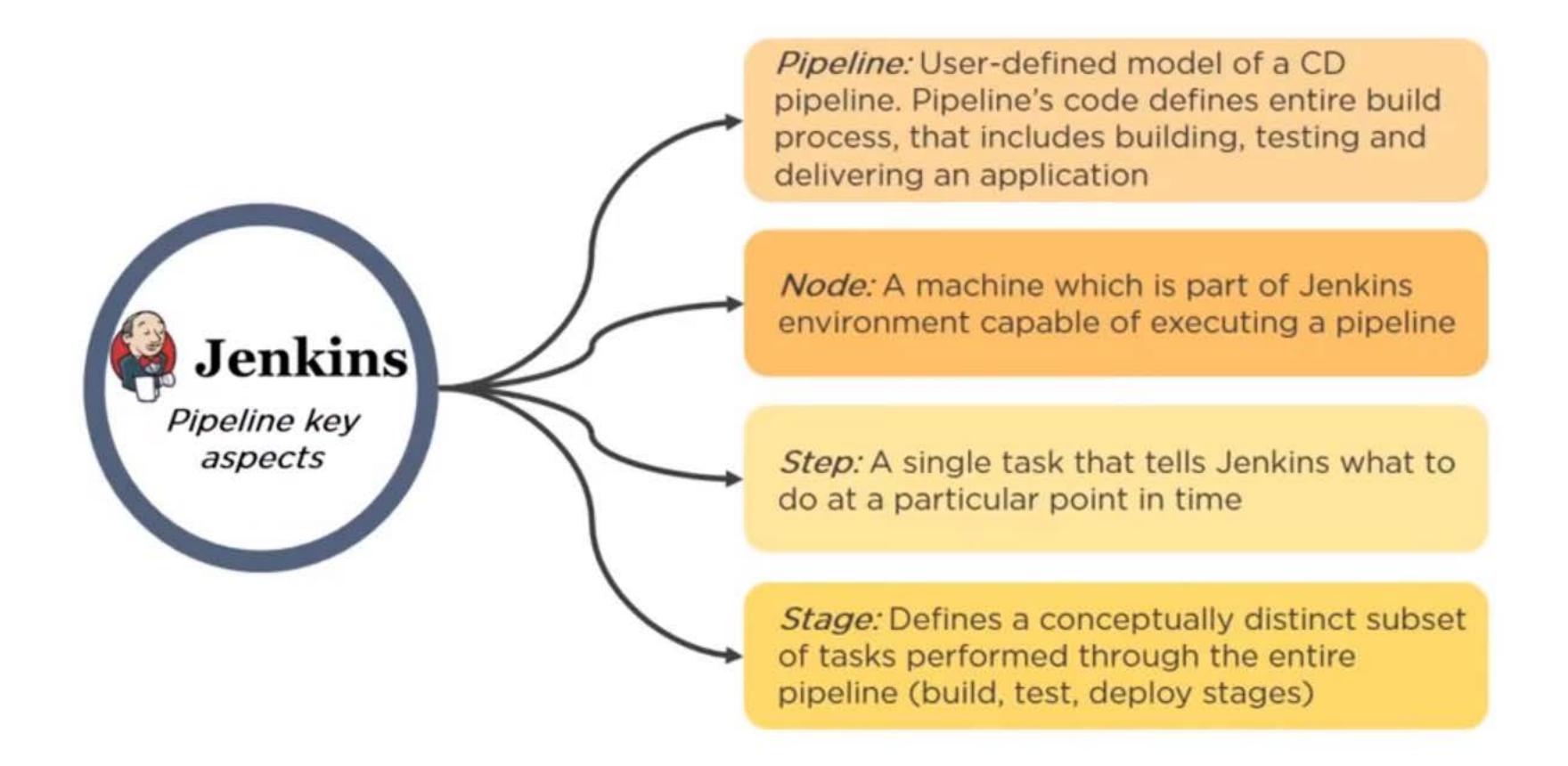


There is a single source of truth for the pipeline which can be viewed and edited





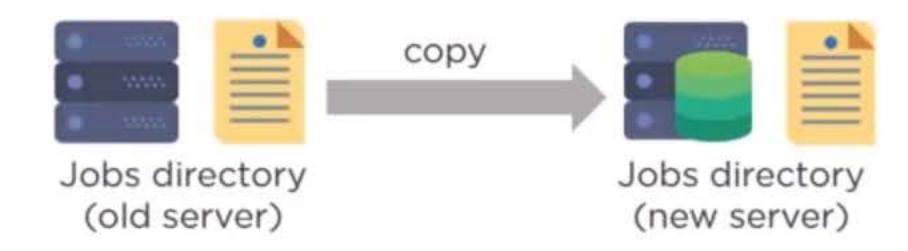
What concepts are key aspects of Jenkins pipeline?





How can you copy Jenkins from one server to another?

Copy the jobs directory from the old server to the new one



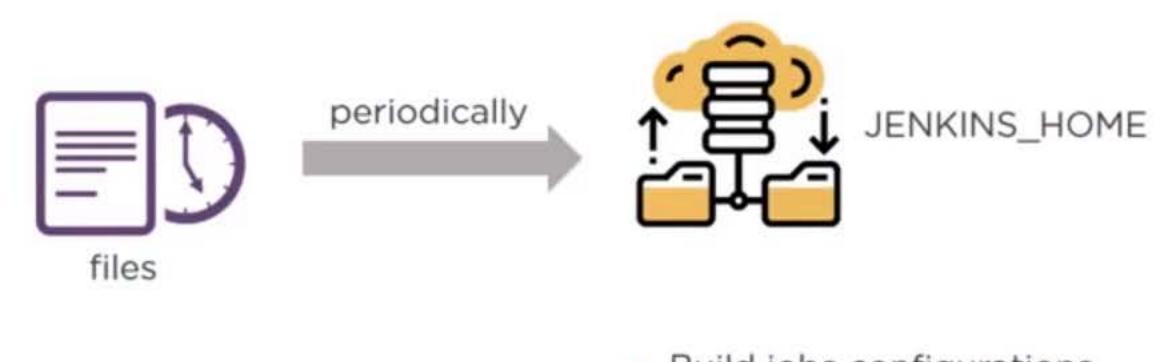
Following are the ways to do it:

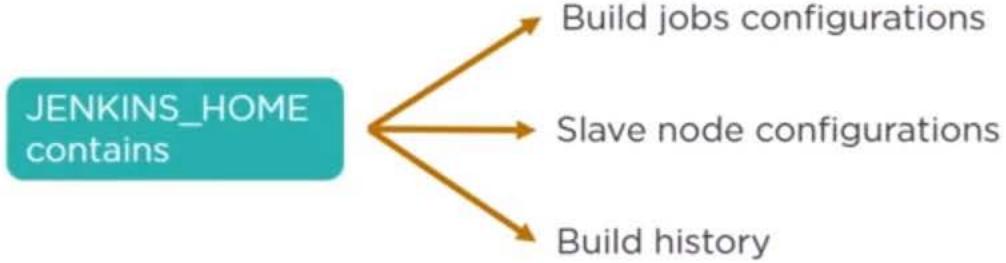
- Move a job from one installation of Jenkins to another by copying the corresponding job directory
- Create a copy of an existing job by making a clone of a job directory by a different name
- Rename an existing job by renaming a directory



How do you create a backup and copy files in Jenkins?

To create a backup, periodically backup your JENKINS_HOME directory





To create a back-up of your Jenkins setup, copy JENKINS_HOME directory. You can also copy a job directory to clone or replicate a job or rename the directory



Name three security mechanisms Jenkins uses to authenticate users.



Jenkins uses an internal database to store user data and credentials



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Lightweight Directory Access Protocol (LDAP) server can be used by Jenkins to authenticate users



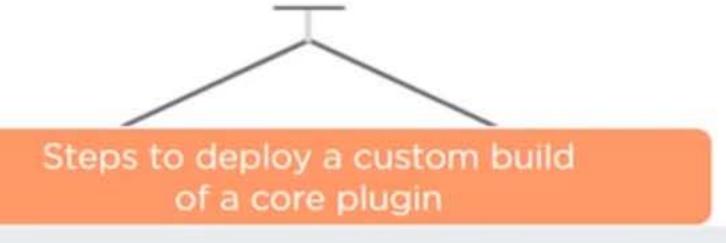
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Jenkins can be configured to employ the authentication mechanism used by the application server upon which it is deployed





How to deploy a custom build of a core plugin?

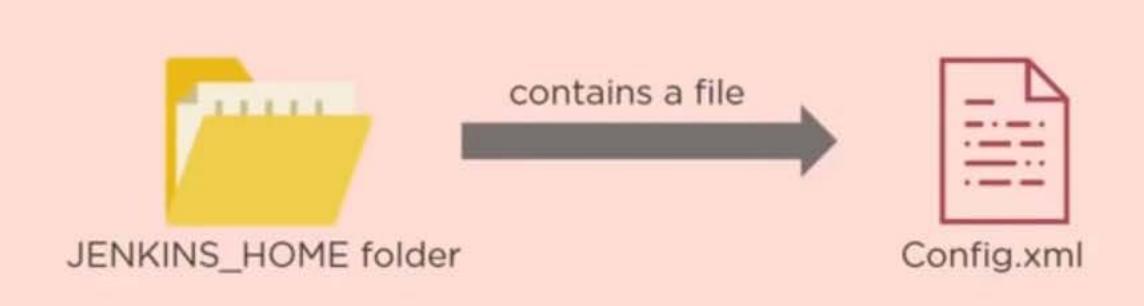


- Copy the .hpi file to \$JENKINS_HOME/plugins
- Remove the plugin's development directory
- Create an empty file called <plugin>.hpi.pinned
- Restart Jenkins and use your custom build of a core plugin





How can you temporarily turn off Jenkins security if the administrative users have locked themselves out of the admin console?



- When security is enabled, Config file contains an XML element named useSecurity that will be set to true
- By changing this setting to false, security will be disabled the next time.
 Jenkins is restarted.



What are the ways in which build can be scheduled/run in Jenkins?



- By source code management commits
- After completion of other builds
- Scheduled to run at specified time
- Manual build requests





Mention the commands that you can use to restart Jenkins manually.

Two ways to manually restart Jenkins:

