Security Controls in Shared Source Code Repositories

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Why?

We need to feel confident that our code is secure and not left open for others to misuse

Prevents unauthorized users from making changes

Gives protection to the code, reducing vulnerabilities in the system

Holds the team more accountable, that their contributions are safe

This builds company trust

Information such as passcodes and data will be protected
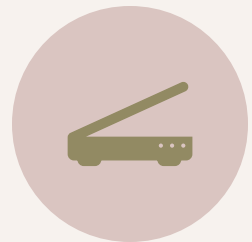
What can we do?

Keep access limited to roles

Avoid using passwords in code

Require pull requests and branch protection

Continuously monitor repositories

Regularly update libraries and dependencies

Use Multi-Factor Authentication

What tools can we use?

AWS: Protects passwords and API keys outside the code.

GitHub branch protection: Only approved changes to the main branch.

Snyk Code: Scans for vulnerabilities, bugs, and outdated libraries.

GitLab pull requests: Requires approval before merging changes.

Azure Active Directory: Assigns team roles and adds multi-factor authentication.

Common Practices to Implement

Permissions must be reviewed regularly to see which roles have access to what.

Make habits for requesting pull requests and avoiding pushing to the main branch.

Libraries and tools need to be regularly updated using dependency scanners.

Monitor activity logs for unusual or unauthorized changes.

Regular security training helps employees incorporate safe habits.

Conclusion

Sharing repositories helps teams work efficiently while following safe coding practices

Implementing tools and habits like:

•Code scanners for security vulnerabilities

•Secrets management to secure passwords and credentials

•Regular updates to keep libraries and dependencies safe

•Pull requests to review and approve any code changes

•These practices help protect source code and prevent unauthorized access.

Sources

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