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Security testing

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Experience in testing since 2007

Experience in manual and automated testing(BE and UI automation)

Experience in non-functional testing – performance, security

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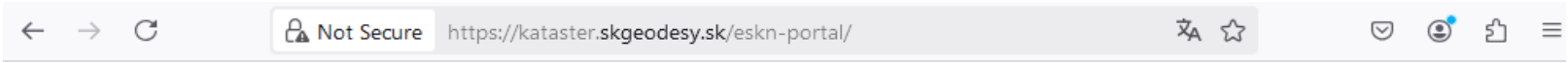
What is security testing



Secure Connection Failed

An error occurred during a connection to kataster.skgeodesy.sk. PR_END_OF_FILE_ERROR

Error code: PR_END_OF_FILE_ERROR

- The page you are trying to view cannot be shown because the authenticity of the received data could not be verified.
- Please contact the website owners to inform them of this problem.

Learn more...

Try Again

Wikipedia: Security testing

Is a process intended to detect flaws in the security mechanisms of an information system and as such help enable it to protect data and maintain functionality as intended. Due to the logical limitations of security testing, passing the security testing process is not an indication that no flaws exist or that the system adequately satisfies the security requirements.

Typical security requirements may include specific elements of confidentiality, integrity, authentication, availability, authorization and non-repudiation. Actual security requirements tested depend on the security requirements implemented by the system. Security testing as a term has a number of different meanings and can be completed in a number of different ways. As such, a Security Taxonomy helps us to understand these different approaches and meanings by providing a base level to work from.

Source: https://en.wikipedia.org/wiki/Security_testing

Testing trends 2025 and security testing

AI in development

AI (artificial intelligence) tools used for development need to be protected from cyberattacks, theft, and damage.

Shift left security

Software development practice that integrates security into the early stages of the development process.

Shift right security

Testing and monitoring software in production to identify and fix security vulnerabilities before they become major problems.

Helps to improve the user experience and ensure that applications can withstand real-world user load.

DevSecOps

Security testing is integrated on all test levels and all areas of product.

All team (QA, Dev, Ops,) is responsible for security of the product.

Did you start with security testing on your project?

No because:

I don't know how to do security testing.
I need someone who will introduce me to security testing.
I don't know where to start.
I need training.
…
…
…
…

No because:

We don't have time on our project.
We have strict release schedule.
There are other priorities for testing.
…
…
…
…

Did you start with security testing on your project?

Yes, but after

Security incident

Yes, but after

Internal/External Audit

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How we started

How we started with security testing on existing project

January 2024

Cyberscurity incident on project.

February 2024

Security team created ~60 recommendations/security checks that were distributed to all teams.

Product owners

For every developed product are created Cybersecurity User Stories, that cover security checks as Acceptance Criteria.

Team

All team (QA, Dev, Ops, Architect, PO, PM) is working on Cybersecurity US.

Review created User Stories (not all AC are aplicable to to every product) + added new AC to cover possible security gaps (~75AC).

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How it was applied

How did we proceed with Cybersecurity User Stories

AC analysis

All AC were analysed and removed/modified that couldn't be applied.

Added new AC to reflect behaviour of the application.

New features

All new requirements include cybersecurity findings.

Testers

Adding Test Cases to verify AC from Cybersecurity US.

New requirements are covered by security test cases.

Team

AC analysis.

Security testing is implemented on all test levels and all areas of product.

Acceptance Criteria for Cybersecurity User Stories

Account Management

The system uses role-based security controls to determine what data can be displayed to a user.

The system restricts each role to a defined set of functions.

The system allows users to create accounts with a unique email address

Passwords

The system rejects login attempts when an unknown username or incorrect password is entered.

Users are required to change their password at first login.

Loging and Monitoring

The system creates and stores security logs.

The system logs changes to the authentication credentials of a user account.

Network Security

Only an authenticated Administrator is allowed to change the security settings of the system.

Load balancing ensures system availability and performance.

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Lesson learned

What have I learned about security testing?

Basic security testing

Implementation of basic security testing is easy and fast.

No need special skillset, junior testers can participate on implementation.

Basic security testing does not require payed tools.

Early testing

Security testing can be applied on early stages of the project by requirement analysis.

All team involved

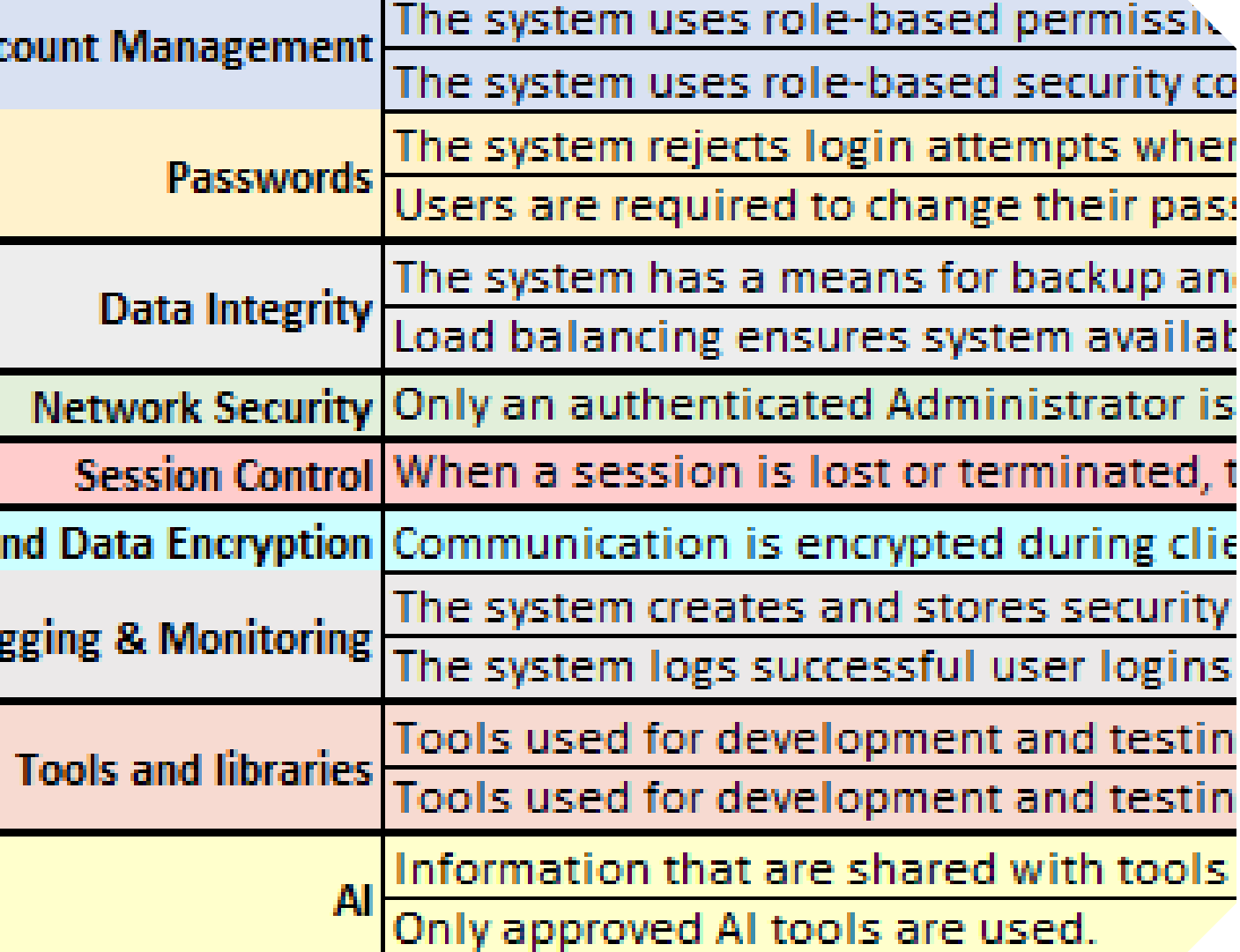
All team (QA, Dev, Ops, Architect, PO, PM) is responsible for security.

Security testing is implemented on all test levels and all areas of product.

Test case preparation

Functional TCs can be reused for basic security tests just by adding simple tag.

Security requirements are covered by security test cases.



Security checks

Created list of 137 basic security checks, that was shared to Global Logic Slovakia.

This list can be used as recommendation for all existing and future projects for basic security tests.

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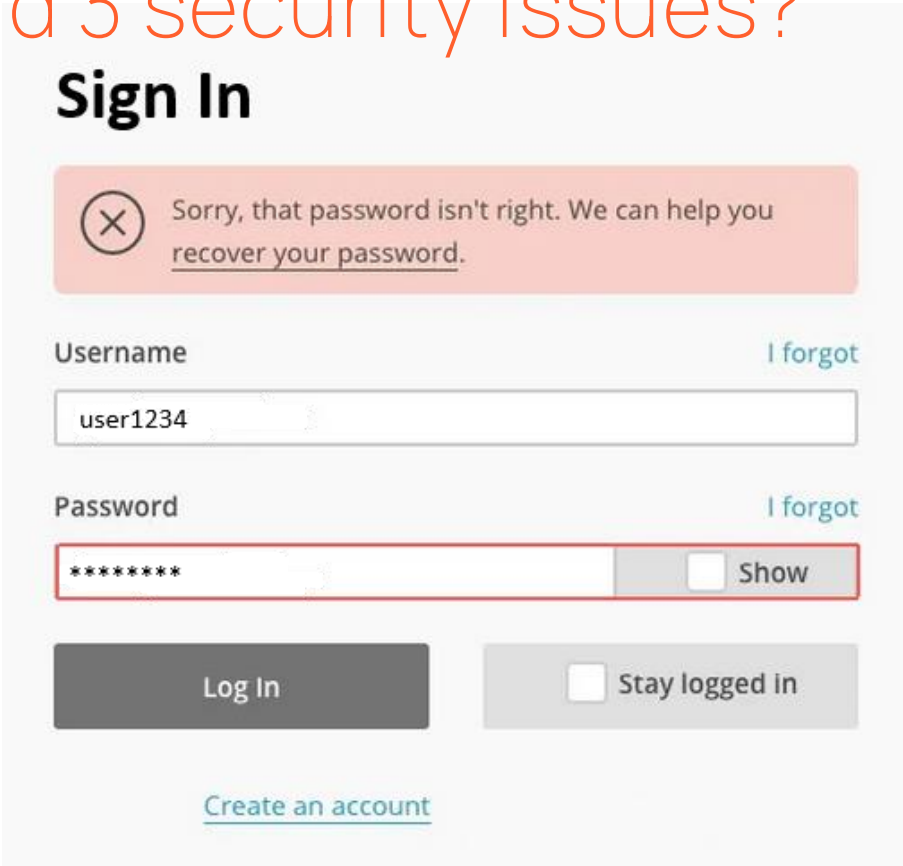
Q/A

Can you find 3 security issues?



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Thank you