

Risks Associated with Penetration Testing



- Careful engagement, planning, and execution is required to avoid any risks associated with penetration testing
- There are certain risks that organizations may face when they plan to conduct a penetration test
- Some of the risks arising from penetration testing are:
 - Testers can gain access to the protected or sensitive data after a successful penetration test attempt
 - Testers can obtain information about the vulnerabilities existing in the organizational infrastructure
 - DoS penetration testing can bring the organization's services down
 - Using certain pretexts in social engineering, a penetration attempt can make employees feel uneasy
- Organizations can avoid such risks by signing NDA and other legal documents, which include details about what is allowed and not allowed to the penetration testing team

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Types of Risks Arising During Penetration Testing



- During the penetration test, some of the activities may pose certain risks and cause the organization unwanted situations such as a denial of service conditions, being locked out critical accounts, or crashing critical servers and applications

Types of risks that come with penetration testing

Technical Risks:

- Directly arises with targets in the production environment
- Example include:
 - Failure of the target
 - Disruption of service
 - Loss or exposure of sensitive data

Organizational Risks:

- Can come as a side effect of penetration testing
- Examples include:
 - A repetitive and unwanted triggering in the incident handling processes of the organization
 - Negligence towards monitoring and responding to incidents during or after a pen test
 - A disruption in business continuity
 - Loss of reputation

Legal Risks:

- Arise from Legal obligations
- Examples include:
 - Violation of laws, clauses in ROE



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Pre-engagement Activities



- Set the foundation for managing and successfully executing a penetration testing engagement
- Are one of the important components in penetration testing that a pen tester or client **should not overlook**
- If the client or pen tester fail to properly follow the pre-engagement activities, they may face issues in their penetration testing engagement like **scope creeping, unsatisfied customers, or even legal issues**
- Start with determining the **goal of the test**

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List the Goals of Penetration Testing



- Identify the organization's goal from the **Purpose** section of the RPF and Preliminary Information Request Document
- Identify **what** the target organization wants to be tested
- Identify the **primary** as well as the secondary goals of the organization
- The primary goals are **business-risk-driven** while the secondary goals are **compliance-driven**

Goal	Primary or Secondary?
Protecting the stakeholder's data	
Reducing financial liability for noncompliance with regulation (for example, GDPR)	
Protecting the company's intellectual property	
Ensuring a high level of trust in regard to customers	
Reduce the likelihood of a breach to protect brand reputation	
Safeguard the organization from failure	
Prevent financial loss through fraud	
Identify the key vulnerabilities	
Improve the security of the technical systems	

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