BUYER'S GUIDE TO

PENETRATION TESTING

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Welcome to CommSec's "Buyer's Guide to Penetration Testing." This eBook covers the different levels of penetration testing, including internal networks, web applications, external networks, and wireless testing.

We explore how penetration testing helps organisations meet compliance requirements and includes information on various types of penetration testing services, ethical hacking, and frequently asked questions.

Whether you are an IT professional or an organisation seeking to enhance your cybersecurity posture, this eBook is an excellent resource. Let's dive in!

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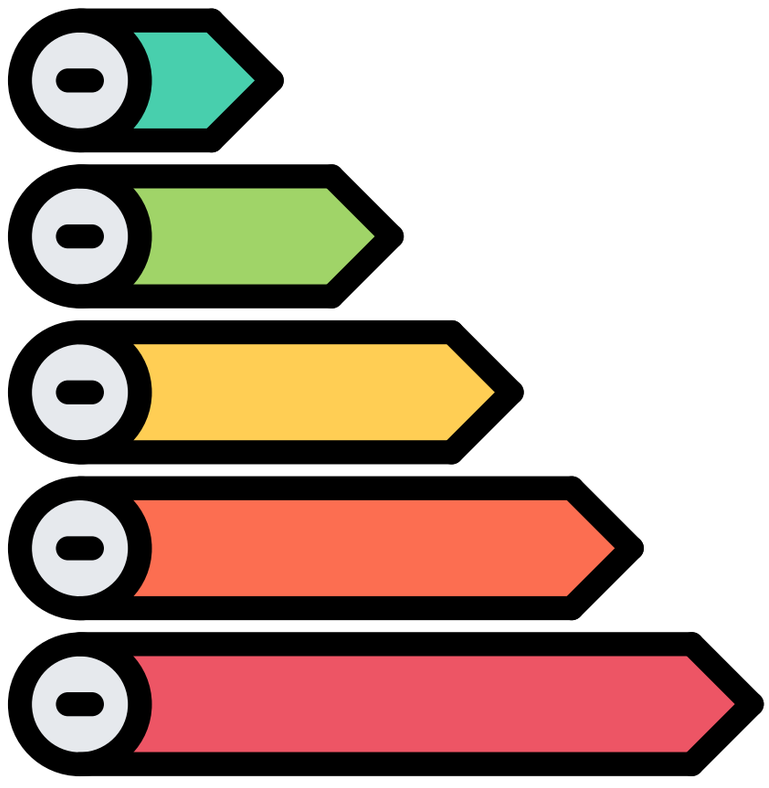
PENETRATION TESTING LEVELS

Penetration testing can be classified into different levels depending on the scope and objectives of the test. There are three main levels of penetration testing: black-box testing, grey-box testing, and white-box testing.

Black-box testing involves testing a system or network without any prior knowledge of the system's internal workings. The tester is given minimal information about the system and must rely on their skills and expertise to identify vulnerabilities.

Grey-box testing involves testing a system or network with some prior knowledge of the system's internal workings. The tester is given partial access to the system or network and can use this information to identify vulnerabilities.

White-box testing involves testing a system or network with full access to the system's internal workings. The tester has access to the system's source code and can identify vulnerabilities more easily.



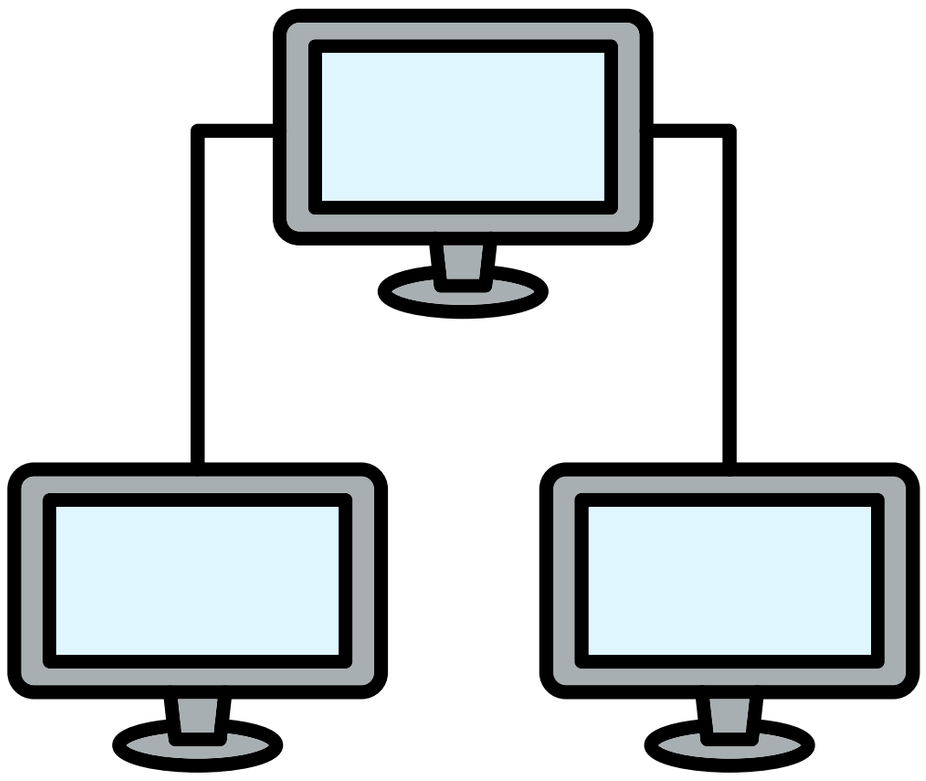
INTERNAL NETWORK PENETRATION TESTING

Internal network penetration testing is a type of security assessment that evaluates the security of an organisation's internal network infrastructure.

This testing is designed to identify potential vulnerabilities that exist within an organisation's internal network, such as unsecured systems, weak passwords, and unpatched software. Internal network penetration testing typically involves simulating a cyber-attack by an insider threat or an attacker who has already breached the perimeter defences.

This testing can help organisations to evaluate the effectiveness of their security controls, policies, and procedures to prevent unauthorised access, data theft, or other malicious activities.

By conducting regular internal network penetration testing, organisations can improve their ability to detect and respond to internal threats, reduce the risk of a successful cyber-attack, and enhance their overall security posture.



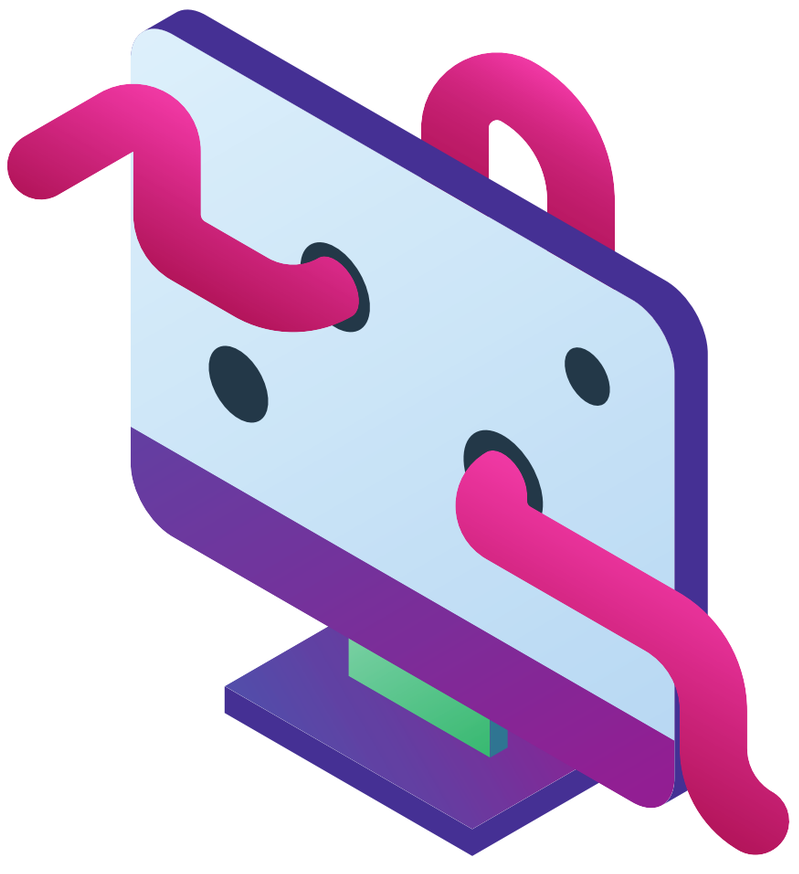
WEB APPLICATION PENETRATION TESTING

Web application penetration testing is a service that evaluates the security of web applications to identify and address potential vulnerabilities that could be exploited by attackers.

This type of testing simulates a real-world cyber-attack on the application to identify security weaknesses such as injection flaws, cross-site scripting (XSS) vulnerabilities, and authentication and authorisation issues.

Professional penetration testing service providers can offer tailored web application penetration testing solutions that are customised to an organisation's specific needs and provide recommendations for remediation of identified vulnerabilities.

By conducting regular web application penetration testing, organisations can improve the security of their web applications, protect against data breaches, and enhance their overall security posture.

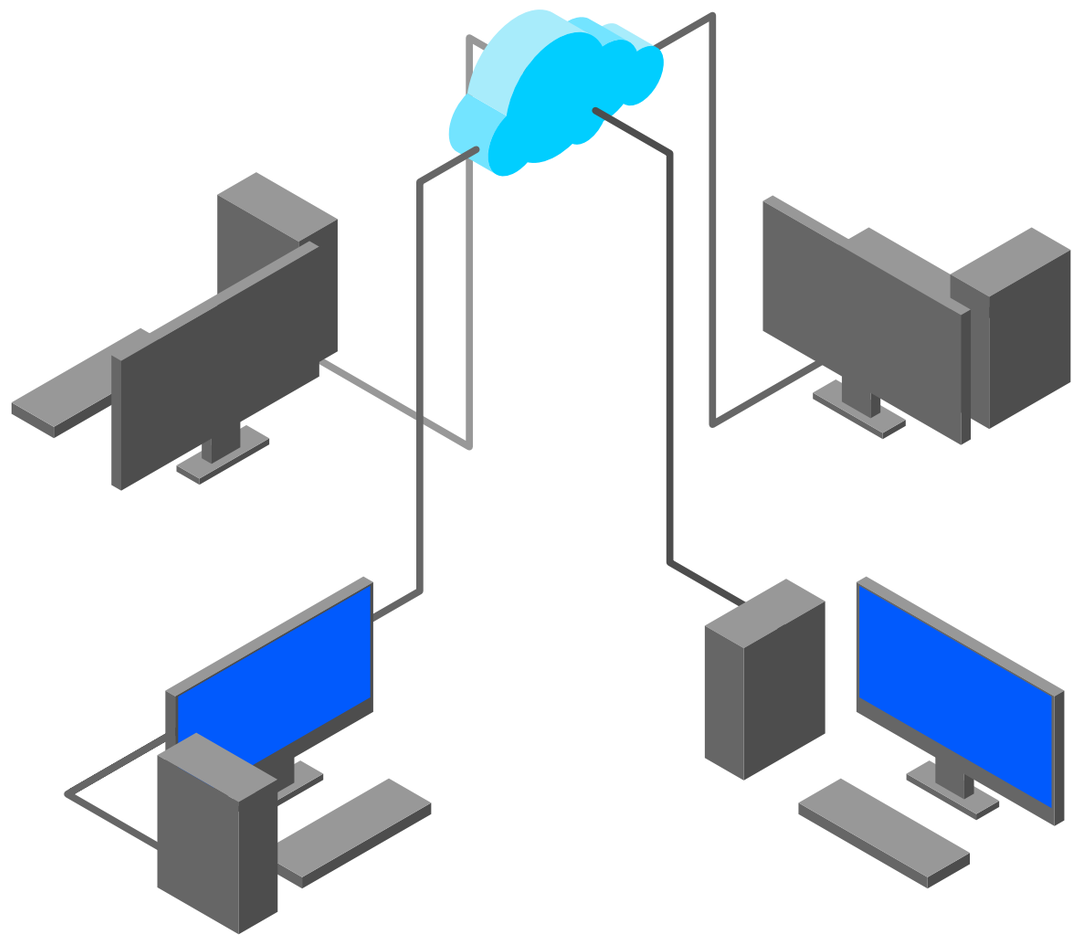


EXTERNAL NETWORK PENETRATION TESTING

External network penetration testing is a crucial service that helps organisations to identify and mitigate security vulnerabilities in their external-facing networks. This type of testing involves simulating real-world attacks on an organisation's internet-facing infrastructure to identify potential weaknesses that could be exploited by attackers.

By conducting regular external network penetration testing, organisations can improve their overall security posture and protect their assets and reputation from potential cyber threats.

Professional penetration testing service providers can offer tailored external network penetration testing solutions to meet an organisation's specific requirements and provide actionable recommendations to address identified vulnerabilities.



WIRELESS PENETRATION TESTING

Wireless penetration testing is a service that evaluates the security of an organisation's wireless networks, including Wi-Fi networks, Bluetooth devices, and other wireless technologies.

This testing is designed to identify potential vulnerabilities and weaknesses in wireless networks that could be exploited by attackers to gain unauthorised access to sensitive information or systems.

Wireless penetration testing can help organisations to evaluate the effectiveness of their wireless security controls, policies, and procedures to prevent unauthorised access, data theft, or other malicious activities.

By conducting regular wireless penetration testing, organisations can enhance their overall security posture, identify and address vulnerabilities before attackers exploit them, and ensure compliance with industry regulations and standards.

PENETRATION TESTING AND COMPLIANCE

Penetration testing has become a crucial element of modern cybersecurity practices, not only for measuring an organisation's security posture but also to comply with industry standards and regulations. Several compliance standards such as PCI DSS, HIPAA, and GDPR require organisations to conduct regular penetration testing to ensure the security of their systems and networks. Failure to comply with these standards can result in significant penalties and fines.

Penetration testing also serves as an essential part of risk management for organisations. By simulating real-world attacks, companies can identify vulnerabilities and potential risks that could cause significant damage if left undiscovered. Once identified, these risks can be appropriately mitigated, allowing companies to strengthen their security posture and protect against cyber-attacks.

Overall, penetration testing plays a critical role in keeping organisations secure and compliant in an ever-evolving threat landscape.

PENETRATION TESTING SERVICES

Penetration testing services are a crucial element in ensuring the security of your organisation's digital assets. By simulating real-world attacks, penetration testing can identify vulnerabilities and weaknesses that could be exploited by malicious actors. At our company, we have a team of experienced and qualified pen testers and ethical hackers who specialise in identifying these vulnerabilities and providing recommendations for remediation.

Our penetration testing services include internal and external network penetration testing, web application penetration testing, wireless penetration testing, and IT health checks. Our team utilises a combination of manual and automated techniques to identify vulnerabilities and potential risks in your network and applications.

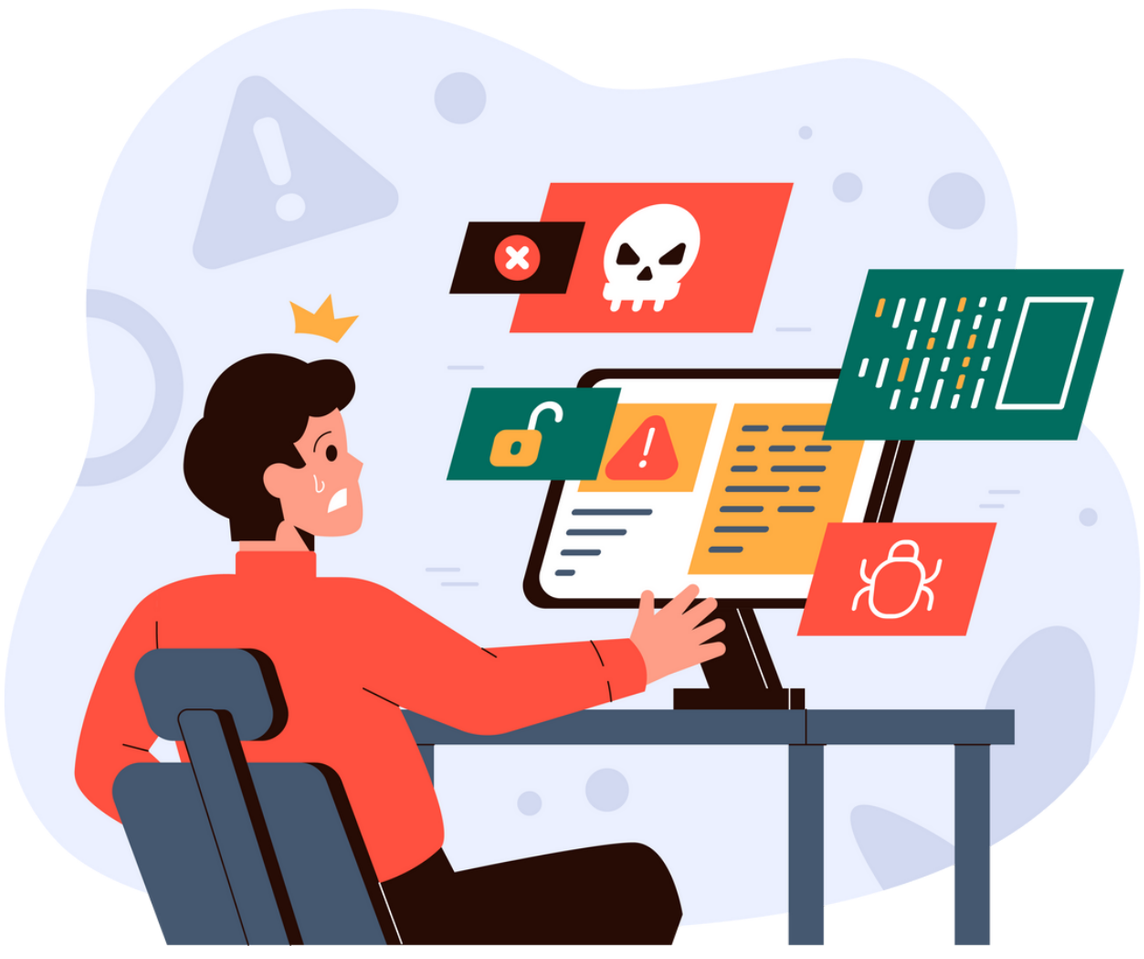
If you're concerned about the security of your organisation's digital assets, we encourage you to get in touch with us to discuss our penetration testing services. We can provide you with a customised quote based on your specific needs and requirements. Don't wait until it's too late, take action now to protect your organisation's valuable data and assets.

SOCIAL ENGINEERING AND PHISHING SIMULATION

Social engineering and phishing penetration testing is a service that evaluates an organisation's vulnerability to phishing attacks, a common form of social engineering attack that aims to trick users into revealing sensitive information such as login credentials or financial data.

This type of testing simulates a phishing attack by sending fake phishing emails to employees and monitoring their responses to identify potential weaknesses in an organisation's security controls and employee training programs.

Regular phishing penetration testing is essential for organisations to improve their resilience against phishing attacks, which are a major cause of data breaches and financial losses. By conducting regular phishing penetration testing, organisations can identify weaknesses in their security controls and employee training programs, and take corrective actions to improve their overall security posture.



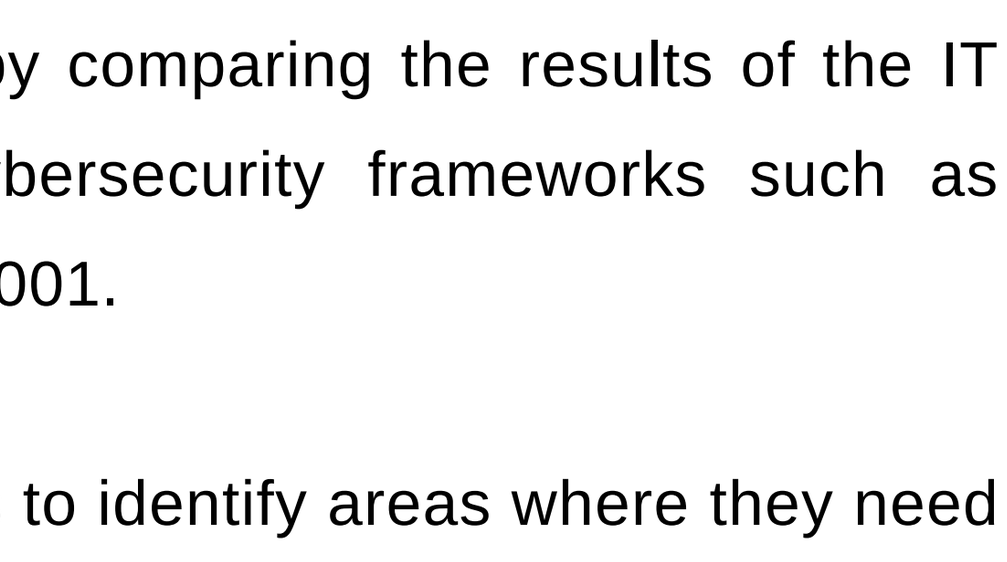
IT HEALTH CHECK

An IT health check is a comprehensive service that evaluates an organisation's IT infrastructure, policies, procedures, and security controls to identify potential vulnerabilities and weaknesses.

This type of assessment can help organisations to improve their overall security posture and comply with industry regulations and standards. IT health check services typically include vulnerability scanning, penetration testing, compliance assessments, and gap analysis. By conducting an IT health check, organisations can identify areas where they need to improve their security controls and procedures and take corrective actions to address any identified vulnerabilities or gaps.

A gap analysis can be conducted by comparing the results of the IT health check with international cybersecurity frameworks such as Cyber Essentials, NIST, and ISO 27001.

This analysis can help organisations to identify areas where they need to improve their cybersecurity practices to meet the requirements of these frameworks and achieve compliance with industry regulations and standards.



ETHICAL HACKING

Ethical hacking and penetration testing are both critical services for organisations to evaluate the effectiveness of their cybersecurity measures. While both services involve attempts to identify vulnerabilities in an organisation's IT systems and networks, they differ in their scope and methodology.

Penetration testing is typically focused on assessing the security of a specific aspect of an information system, such as a web application or network infrastructure, according to an outlined scope. Penetration testers use a defined set of tools and techniques to simulate real-world cyber-attacks and identify potential vulnerabilities that could be exploited by attackers. On the other hand, ethical hackers carry out many types of cyberattacks on an entire system using multiple attack vectors without being restricted by a scope document.

Ethical hackers use a broader range of tools and techniques to identify vulnerabilities and weaknesses in an organisation's IT systems and networks. Both ethical hacking and penetration testing services can provide valuable insights into an organisation's cybersecurity posture and help to identify areas for improvement.

FAQS

1. What is penetration testing?

Penetration testing, also known as pen testing, is a process of assessing the security of a system, network, or application by simulating real-world cyber-attacks to identify vulnerabilities that could be exploited by malicious actors.

2. Why is penetration testing important?

Penetration testing is important as it helps organisations to identify and mitigate security vulnerabilities before attackers exploit them. It can also help organisations to comply with regulatory requirements and industry standards.

3. Who should conduct penetration testing?

Penetration testing should be conducted by trained and experienced professionals who have the necessary knowledge and skills to identify and exploit security vulnerabilities.

4. How often should penetration testing be conducted?

The frequency of penetration testing depends on various factors such as the sise of the organisation, the complexity of the systems and networks, and the industry regulations. In general, organisations should conduct penetration testing at least once a year or after significant changes to the systems and networks.

5. What types of penetration testing are there?

There are various types of penetration testing, including external network penetration testing, internal network penetration testing, web application penetration testing, wireless penetration testing, phishing penetration testing, IT health check, and ethical hacking.

6. What are the steps involved in a penetration testing process?

The penetration testing process typically involves five stages: reconnaissance, scanning, gaining access, maintaining access, and covering tracks.

7. Will penetration testing disrupt normal business operations?

Penetration testing may cause some disruption to normal business operations, especially during the initial stages of the testing process. However, professional penetration testing services should be conducted with minimal disruption to normal business operations.

8. What is the difference between a vulnerability assessment and penetration testing?

A vulnerability assessment is a process of identifying and documenting potential security vulnerabilities in a system, network, or application. Penetration testing goes a step further and attempts to exploit the identified vulnerabilities to determine their impact on the system or network.

9. What happens after a penetration test is conducted?

After a penetration test is conducted, the results are documented in a report that outlines the vulnerabilities that were identified and the recommended remediation measures. The organisation can then use this report to prioritise and address the identified vulnerabilities.

10. How can organisations ensure the effectiveness of penetration testing?

Organisations can ensure the effectiveness of penetration testing by selecting a reputable and experienced testing provider, defining clear testing objectives, establishing a clear scope of work, and monitoring the testing process to ensure that it is conducted in a safe and controlled manner.

PENETRATION TESTING

Penetration testing is an essential tool that organisations can use to identify vulnerabilities in their systems and networks.

There are various types of penetration testing services, including external network penetration testing, internal network penetration testing, web application penetration testing, wireless penetration testing, phishing penetration testing, IT health check, and ethical hacking.

By conducting regular penetration testing, organisations can identify and mitigate risks before they can be exploited by attackers.

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