Fact Sheet

BDO Advisory

VULNERABILITY ASSESSMENT & PENETRATION TESTING

Improve your cyber resilience

Context

Cyber-attacks and their success rate in network breaches are increasing in frequency and sophistication. At the root of many successful cyber-attacks are the vulnerabilities that exist within network infrastructure, software applications and the very humans that use those networks and applications.

A well-established technique to minimising and mitigating vulnerabilities within network infrastructure and software applications is the use of Vulnerability Assessments and Penetration Testing (VA & PT). The use of VA & PT is a proven and powerful technique to manage the security risk within an organisation or family office.

Further, performing a VA & PT effectively determines your cybersecurity risk profile and general security posture. Understanding and establishing a proven VA & PT process and methodology and utilising the right tools and techniques will ensure the VA & PT accomplishes its goal of improving the overall security of the organisation.

BDO

OUR METHODOLOGY TO VULNERABILITY ASSESSMENT

BDO has developed a VA methodology which enables organizations to gain insights from their external IT attack surface and uncover possible weak points that can be exploited by cyber threats. Tool used is a cyber intelligence service that takes an adversarial approach to identify and assess the security posture of the external IT assets of an organization.

Our detailed observations are given a risk classification from High to Low and the definitions of these priorities are given below. The risk classification is being done on a criticality of the vulnerabilities.

OUR APPROACH TO VULNERABILITY ASSESSMENT

BDO will generate a report which will be presented in the form of a dashboard on a web site with one executive management layer and one detailed technical layer. The detailed view will present the list of vulnerabilities detected with the following information:

- Name of the vulnerability as referred in the CVE (Common Vulnerabilities and Exposures) database;
- Detailed description of the vulnerability with potential impact;
- Criticality of the vulnerability according to the agreed risk scoring methodology:
- DNS name of the host, with resolved IP address on which the vulnerability is found;
- The first date on which the scanner detected the vulnerability on the system;
- Mitigation recommendations.

H	M	L
High	**Medium**	**Low**
High risk indicates that there are serious weaknesses in the security controls and there is a serious risk that must be mitigated as soon as possible.	Medium risk indicates that there are weaknesses in the security controls that could lead to a high risk if left unattended and should be mitigated outside normal patching cycles.	Low risk indicates that while there are weaknesses in the security controls these are of limited significance and can be addressed during the normal life cycle management.

OUR METHODOLOGY TO PENETRATION TESTING

BDO developed a methodology used for PT which is based on extensive international experience in delivering similar exercises. The approach is consistent with the best practices in this area and uses, among others, proven elements of the following methodologies and studies:

- OWASP Application Security Verification Standard (ASVS)
- Penetration Testing Execution Standard (PTES)
- Open Source Security Testing Methodology Manual (OSSTMM)
- Open Web Application Security Project (OWASP)
- NIST 800-42, Guideline on Network Security Testing
- Information System Security Assessment Framework (ISSAF)

OUR APPROACH TO PENETRATION TESTING

PT by experienced ethical hackers is the best method to get a good and independent view on the actual state of your IT infrastructure and application landscape security. In order to identify the technical IT security risks, multiple scenarios are possible. PT is performed in white, black or grey box scenarios.

WHITE BOX I An attack carried out on the basis of prior knowledge such as log-in details or other relevant information to test more specifically on certain domains.

BLACK BOX I An attack without prior knowledge of the environment.

GREY BOX I An attack with limited prior knowledge of the infrastructure, in which the extent to which more information about the target can be found is investigated.

Our ethical attacks are conducted on the basis of best practices, appropriate tools and specific expertise in accordance with (international) standards.

1. **Determining the Scope**
   Together with you, we will go through various options and develop the ideal scenarios for your organisation. In doing so, we assist in determining the targets and take into account any specific characteristics or expectations.

2. **Performing Security Tests**
   Except for the provision of certain information, an ethical attack does not require the intervention of the internal IT department. The attack is coordinated and carried out remotely so that there is no operational impact.

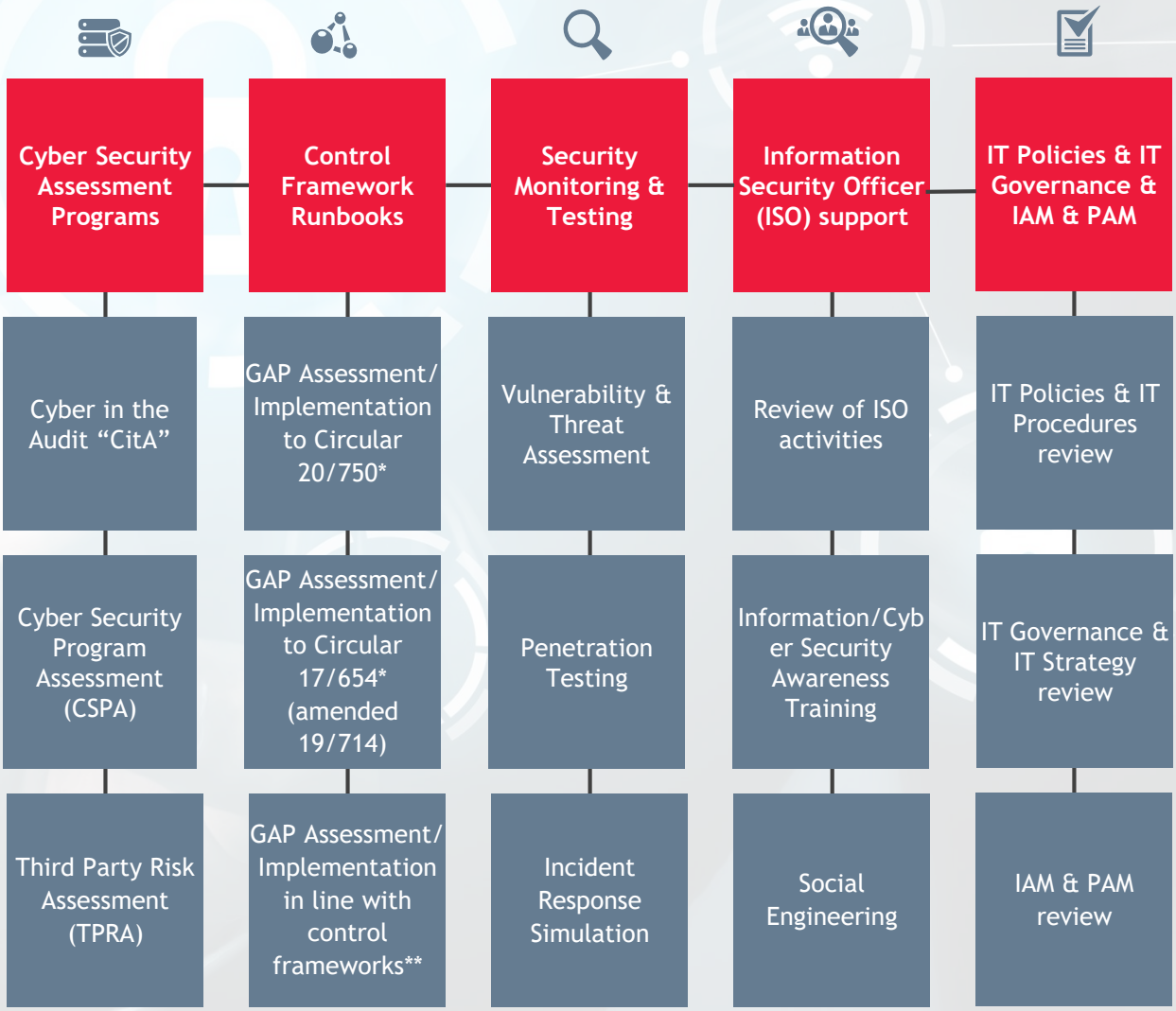
3. **Analysis & Reporting**
   After performing the security tests, we draw up our detailed observations and management summary. For each observation, we document the problem, assess recommendation. The report is written in comprehensible language, readable and meaningful for both management and technical staff.

OUR CYBER SERVICES TAILORED TO YOUR NEEDS

At BDO, we believe that cyber-attacks and data breaches are one of the biggest risk facing organizations and their boards today. Impact of cyber incidents could impair an organization's reputation, market value and financial position.

Unfortunately, there is no such thing as perfect security, which is why it is important to apply a risk-based approach, focusing first on the highest priorities and risk components. We are happy to help you with that. As an independent third party, BDO advises organizations to take appropriate cyber measures.

In order to answer to those threats, we offer our customers across all sectors and industries various services for addressing the different weaknesses or regulatory obligations, each with an approach adapted to the size and complexity of our clients. This results in clear recommendations and specific actions to ensure the confidentiality, integrity, availability and security of your data and systems.



* GAP assessment/Implementation of controls for the financial institutions which are regulated by CSSF in Luxembourg

* GAP assessment/Implementation of controls to be in line with common control frameworks - requirements for compliance with control frameworks (e.g. ISO 27001, ISO 22301, NIST Cybersecurity Framework, etc.)

FOR FURTHER INFORMATION, FEEL FREE TO CONTACT OUR EXPERTS:

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