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**CyberSecurity**  
MALAYSIA

# NETWORK ROBUSTNESS FOR SECURITY ASSURANCE (CERTIFIED PENETRATION TESTER)



 **15 - 21 October 2020**

 **CyberSecurity Malaysia, Cyberjaya, Selangor, Malaysia**

The training programme leverages on the state-of-the-art cyber security knowledge from domain experts and experience practitioners. Certified Penetration Tester is a hands-on training and certification programmes that enable the participants to handle the vulnerability assessment and penetration test for their clients.

## COURSE OBJECTIVES

1. Cultivating awareness, nurturing adoption and establishing capabilities in securing information effectively and creating a safer cyber space;
2. Providing practical knowledge in analysing and managing system vulnerabilities;
3. Providing practical experiences in managing security incidents and defending security perimeters;
4. Developing capable cyber security professionals for the region;
5. To understand different cyber attacks used by hackers;
6. To learn how to conduct vulnerability assessments on the networks and systems;
7. To learn ways to harden the network and systems thus securing the corporate networks and systems; and
8. To prepare and submit Vulnerability Assessment & Penetration Test Reports.

## WHO SHOULD PARTICIPATE

1. Network administrators.
2. Network executives.
3. Security professionals who are interested in conducting vulnerability assessment and penetration test for their clients.

## PREREQUISITE / ELIGIBILITY

1. Participants must be between 26 - 50 years old;
2. Two or more years of working experience in the cyber security area / incident handling;
3. A Bachelor degree holder in IT;
4. Proficient in the English language; and
5. Medically fit.

# PROGRAM OUTLINE

## 14 Oct

Arrival of participants

Check-in at the hotel

## 15 Oct

Welcoming Remarks

Country Representative Presentations

Visit to CyberSecurity Malaysia's facilities

## 16 – 20 Oct

### Training: Cyber Security Essentials

#### 1. Introduction to Vulnerability Assessment & Penetration Testing

- Vulnerability Exploit, Payload, Listener
- Vulnerability Assessment Vs. Penetration Testing
- Types of Vulnerability Research Sources for Penetration Testers, Exploits
- Tool sources for Penetration Testers, Commercial Tools for Penetration Testers, Penetration Testing Methodologies and Penetration Test Report Template
- Latest Attacks – Demos

#### 2. Information Intelligence Techniques

- Passive Information Gathering
- Information Intelligence and Mapping the Customers' organizations
- Information Intelligence and Mapping the Infrastructure of the Target

#### 3. Scanning & Vulnerability Assessments

- Scanning Types & Options
- NMap Scanning
  - Ninja & Non-Ninja Scan Types
  - Multiple IP Addresses Scanning
  - Host Discovery
  - Ping & Port Scanning
  - OS Fingerprinting & Service Enumerations
  - NMap Scripts
  - Host Scanning: Bypassing Firewalls
  - Decoys
- ZenMap
- Netcat Fingerprinting
- Nessus: Vulnerability Scanning & Reporting
- NeXpose: Vulnerability Scanning & Reporting
- OpenVAS

#### 4. Cracking & Social Engineering

- MITM Concepts & Attacks
- Password Cracking
  - Brute Force Tools: Hydra, Medusa
  - Crunch Password Generator
  - FTP Credential Cracking

- Telnet Brute Force
- SSH Login Brute Force Attack
- Password Cracking with John the Ripper

- Social Engineering Attacks: Java Applet Attack Vectors, Infectious Media Generators, Credential Harvester Attack Methods, Spear-Phishing Attack Methods and many more

#### 5. Exploitation & Penetration Test

- Metasploit Framework Concepts
- Metasploit Community & Armitage
- Metasploit Exploitations: Dump Password Hash, Capture Screenshots, Capture Keystrokes;
- Privilege Escalation, Pivoting, ARP Scan, Stdapi and Priv, Persistence and Backdoors
- Maintaining Access, Cover Tracks, Post Exploitations.
- Anti-Virus Evasion Frameworks and Methods
- Netcat Exploitations
- Backdoor using Msfvenom & Netcat
- Advanced Exploitations using PowerShell
- USB Based exploitation on Win 7 & Win 10
- Penetration Test Reporting

#### 6. PowerShell Exploitation

- PowerShell Basics
- PowerShell Log Analysis
- PowerShell Malwares to Evade Defenses

#### 7. Web Pentest

- Web Application Basics
- Web Application Fingerprinting
- Payment Gateway & Order Tampering
- Labs on OWASP TOP 10 Vulnerabilities and its sub categories using Mutillidae, DVWA [SQL Injection, Cross Site Scripting, Cross Site Request Forgery, LDAP Injection, Command Injection, Parameter/Form Tampering, Payment Gateway Hacking, Improper Error Handling, Directory Traversal, Insecure storage, Information Leakage, Broken Account Management, Denial of Service, Buffer Overflow, Broken Session Management, Session Fixation, Security Misconfiguration, File Upload and Download and many more
- Penetration Test Reporting

#### 8. Certified Penetration Tester Examination

## 21 Oct

AM | Visit to the Ministry of Foreign Affairs, Malaysia

PM | Closing Ceremony

## 22 Oct

Check-out

Depart to the airport

# THE MALAYSIAN TECHNICAL COOPERATION PROGRAMME

The Malaysian Technical Cooperation Programme (MTCP) was officially launched on 7 September 1980 at the Commonwealth Heads of Government Regional Meeting (CHOGRM) in New Delhi, India, to signify Malaysia's commitment to the South-South Cooperation, in particular, the Technical Cooperation among Developing Countries (TCDC).

In line with the spirit of the South-South Cooperation, Malaysia through the MTCP shares its development

experiences and expertise with other developing countries. The MTCP was first formulated based on the belief that the development of a country depends on the quality of the human resources. The programme forms part of the commitment of the Malaysian Government towards the promotion of technical cooperation among developing countries, strengthening of regional and sub-regional cooperation, as well as nurturing collective self-reliance among the developing countries.

The MTCP emphasizes on the development of human resources through the provision of trainings in various areas which are essential for a country's development such as the public administration, good governance, health services, education, agriculture, sustainable

development, poverty alleviation, investment promotion, ICT and banking. Since its inception in 1980, 34,415 participants from 144 recipient countries have benefited from the various programmes offered under the MTCP. More information at MTCP website : [www.mtcp.kln.gov.my](http://www.mtcp.kln.gov.my)

## Objectives Of MTCP

1. To share the development experience with other countries;
2. To strengthen bilateral relations between Malaysia and other developing countries;
3. To promote the South-South Cooperation (SSC); and
4. To promote the technical cooperation among developing countries.

## Other Information About the MTCP Programme

### 1. Air Fares:

A return air ticket from the capital city of the recipient country to Kuala Lumpur on economy class is provided for the participants. Please refer to the MTCP website for further details. Expenditures on all visa-related fees, transit fees, domestic passenger terminal fees, phone charges, private purchases, etc borne by the participants.

### 2. Accommodation:

Full board accommodation (twin sharing) will be provided for the duration of the training. The participants are not allowed to change any of the arrangement done by the training institution.

### 3. Courses fees:

All courses fees will be borne by the Government of Malaysia under the MTCP.

### 4. Medical Treatment:

The participants should be certified medically and physically fit to participate in this program. In the case of emergencies and in need of medical treatment, the medical expenses in a government hospital will be borne by the Government of Malaysia. Dental treatments are restricted to extraction and filling only.

### 5. Visa & Vaccination:

It is mandatory for all the MTCP participants to follow the Visa-With-Reference (VDR) application procedures. Once the approvals are obtained, the training institution should send a copy of the VDR approval letter to the participants. Subsequently, with the copy of the approval, the participants may get the VDR from the nearest Embassy of Malaysia. Wherever applicable, participants are advised to arrange for vaccination on their own prior to travel to Malaysia. Successful participants are advised to arrange for their own visa and vaccination prior to their travel.

All expenses to fulfil these requirements will be borne by the participants. Successful participants are required to submit a coloured photocopy of the first page of their valid passport to the training institution for immigration purpose.

### 6. Vaccination for the Yellow Fever:

Participants from some countries are required to take a mandatory vaccination for yellow fever at least 10 days prior to their departure to Malaysia. Yellow Fever certificate is required to be produced upon landing in Malaysia for countries as listed at the link below: <http://www.imi.gov.my/index.php/en/main-services/visa/visa-requirement-by-country.html>

### 7. Dress Code:

During lectures, male participants are required to dress in long-sleeved shirts with ties, long pants and lounge suits and female participants should be appropriately dressed in office attire. For formal occasions – lounge suit or national costume are required.

### 8. General Condition:

The participants shall conduct themselves at all times in a manner compatible with their responsibilities as MTCP scholarship holders and abide by the rules and regulation as stipulated by the host government in respect of this training course.

The award may be terminated at any time due to unsatisfactory progress and conduct of the participants.

**\*\*Participants are NOT allowed to bring along their spouse for the duration of the course.**

## How To Apply

- Application must be made using the prescribed MTCP form available at [https://mtcpcoms.kln.gov.my/mtcpcoms/online/list\\_course](https://mtcpcoms.kln.gov.my/mtcpcoms/online/list_course)
- The form must be completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in applicant's country. The completed forms must be submitted to the relevant Malaysian Embassy or High Commission. Please ensure all required information is provided and legible. Forms which are incomplete or not endorsed, will be not accepted.
- The application form must be submitted together with:
  - Copy of the passport (All pages & coloured)
  - Passport size colour photo (3.5cm x 5cm) (White background)
  - Medical report.

**Note:** Only successful applicants will be notified. No written notification will be sent to unsuccessful applicants.

For enquiries, please contact:

**Ms. Noraini Abdul Rahman**

International Engagement Department, CyberSecurity Malaysia

Email: [international@cybersecurity.my](mailto:international@cybersecurity.my). For more info, visit: <https://mtcpcoms.kln.gov.my/mtcpcoms/online/login>

**Closing Date: 31 July 2020**