ITU Regional Training Courses on Certified Network Engineer for IPv6 (CNE6) - Silver Level
Khartoum-Sudan, 30 October to 1 November 2022

TRAINING OUTLINE

COURSE DESCRIPTION

Title	**ITU Regional Training Courses on Certified Network Engineer for IPv6 (CNE6) - Silver Level**
Modality	Physical
Dates	**30 Oct-01 November 2022**
Duration	3 Days
Registration deadline	29 Oct. 2022
Training fees	Free
Description	The Certified Network Engineer for IPv6 (CSE6) Silver training program is designed to provide fundamental information on the implementation of security parameters in the transition from IPv4 to IPv6 and expose the participants on the security issues in the deployment of IPv6 in the organization network. This course would provide fundamental understanding about security issue revolving around IPv6 and will be one of the pre-requisites for Certified Security Engineer for IPv6 (CSE6) Gold.

1. LEARNING OBJECTIVES

The Certified Network Engineer for IPv6 (CNE6) Silver Level (Level-1) training course is designed to provide the participants with foundation information on IPv6 technology and exposure the participants on the technical knowhow to start the IPv6 implementation.

2. LEARNING OUTCOMES

By the end of these training courses, the participants will be able to understand:
- Why need to move IPv6 platform?
- IPv6 addressing architecture.
- IPv6 packet structure and header format.
- IPv6 transitions mechanisms.
- IPv6 Security issues and features.
- IPv6 attacks and tools kit.
- Have hands-on Lab on CNE6.

3. TARGET POPULATION

The CNE6 course is designed for IPv6 specialist, network designers, networking consultants, IT managers, business analyst, applications specialists, and IT directors.

4. ENTRY REQUIREMENTS

Interested applicants/participants should have:

- First level university degree (Bachelor of Sciences) in telecom engineering or related field,
- At least 3 years of hands-on experiences in Telecom/ICTs related filed.
- A good knowledge of general network security concepts
- Knowledge in IPv4 security

5. TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)

1. Eng. Intisar Elhaj
Email: intsarus@gmail.com
 	
2. Eng. Sara Alamin
 	
   Email: sara.alamin@protonmail.com
 	
3. Eng : Rawan Shreef
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6. TRAINING COURSE CONTENTS

The following is the outline of the course:

1. IPv6 Introduction.
2. IPv6 addressing architecture.
3. IPv6 Packet structure and header formats.

4. ICMPv6 & neighbor discovery.
5. Transition mechanisms.
6. IPv6 Security issues and features
7. IPv6 attacks and tools kit

8. Hands-on Lab

7. TRAINING COURSE SCHEDULE

Session	Topic	Exercises and interactions
Day 1 /Session 1	• Introduction • IPv6 Addressing Architecture • Packet Structure & Header Formats	• Understanding of Implications of ipv4 Exhaustion • Working with IPv6 Addresses • Understanding IPv6 Address Types • IPv4 and IPv6 Comparison
Day 2/Session 2	• ICMPv6 & Neighbor Discovery Lab 1	• Experience configuring and maintaining basic IPv4 • Experience using the CLI • IPv6 subnetting procedure • Creating an IPv6 Address Plan • Key Functions of IPv6 Neighbour Discovery (ND)
Day 3/Session 3	• Transition Mechanisms • Lab 2 • Exam	• Provisioning IPv6 Configuration • Basic IPv6 Routing • The fundamental WHY of Transition Techniques

8. METHODOLOGY (Didactic approach)

- This class covers both theoretical and practical knowledge.
- The training would involve both theory and practical led by the instructor.
- The practical classes are conducted in a laboratory environment.
- The participants will have hands on experience using the actual equipment.
- Quizzes will have conducted during the class to test the knowledge of participants about a particular subtopic.
- Professional examination both theoretical and practical will be conducted to test the participant's knowledge towards end of the class.
- All the participants that passed the examination will be awarded 2 certificates as follows:
    1. Free Training certificate signed by ITU and TPRA and according to ITU training certificate
    2. Paid Professional certificate that endorsed by Global IPv6 Forum

9. EVALUATION AND GRADING

Participants' performance in this training will be determined using a combination of grades for the participation sessions discussions and self-assessment quizzes.

Where:

- Participation in the sessions will be awarded 10 per cent.
- Self- Assessments quizzes will be worth 20 per cent of the final grade of the training.
- Final examination for professional certificate to become CNE6 will be worth 70 per cent of the final grade of the training.

Please note that total score higher than 60% is required to obtain the ITU and TPRA-Sudan training certificate.

10. TRAINING COORDINATION

Host Coordinator:	ITU Coordinator:
Eng. Ahmed Atyya Numbering Manager, at TPRA, Email: (ahmed.atyya@tpra.gov.sd)	**Eng. Mustafa Al Mahdi** Programme Officer ITU Arab Regional Office Email: mustafa.almahdi@itu.int

11. REGISTRATION

You can register for the course online at the following link: Registration (itu.int)