



# HEROTEC

NETWORK PROFESSIONAL TRAINING

## Android™ Security Essentials

<b>Related Certificate</b>	<b>Android</b>
<b>Course ID</b>	<b>Android Security Esstials</b>
<b>Related Exams</b>	<b>AND-402</b>
<b>Audience</b>	<b>IT Professional</b>
<b>Hours</b>	<b>12</b>

## Overview:

This is a professional course will cover the Android™ security model and concerns from both the developer and end-user point of view.

## Objective:

At Course Completion , a student will be able to:

- Understand Android software architecture.
- Understand Android's security model.
- Build Android applications with security best practices in mind.
- Build more secure and more robust application that appeals to clients.

## Outlines:

### Lesson 1: Introduction and Android Security Architecture

- Android Security Program Overview and Architecture.
- Kernel level security (Linux), and rooting Android.
- Android Application Components.
- The Application Sandbox.
- Managers and Services
- Activity Manager Service.
- Package Manager Service.
- Notification Manager Service.
- Search Manager Service.
- Connectivity, Telephony, and Wi-Fi Manager Services.
- Download and Storage Manager Services.
- Window Manager Service.

### Lesson 2: Android Permission Model and third party applications

- Android Application Framework Layer.
- Third party application permissions.
- Using Protected APIs.
- Custom Permissions.
- Android Malware: Prevention, Detection, and Removal.
- Security Enhanced Android (SE Android).

### Lesson 3: Component Security and Protecting data storage

- How Android achieves Inter-process communication.
- Restricting access to Android components.
- Vulnerabilities of Stored Data.
- Cryptography and Encryption.
- Signing your application.

### Lesson 4: Client-Server communication security.

- Threats Facing Devices Transferring Data.
- Protecting web transferred data.
- Input Validation.
- Prevent Command Injection

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