

KAÏNA-COM

TRAINING CATALOGUE

Android Software Architecture

Broad description of the Android OS platform



KMO007 – Android Software Architecture

Reference KMO007

Experience

- Beginner
- Intermediate
- Advanced

Duration Training Program:

- 1 day

Training Method

- I: i-learning, individual training (web-based training)
- V: v-learning, virtual class
- C: c-learning, classroom training

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LE CARRÉ HAUSSMANN II,
6 Allée de la Connaissance
77127 Lieusaint - France

Price 688,50 € HT

Prerequisite A basic understanding of embedded and cross-platform development.

Audience System architects, software and hardware engineers looking for a clear understanding of internal architecture and internals of Android OS and its possible uses

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KMO007 – Android Software Architecture, Continued

Objective

Smartphones are at the forefront of a major transformation of the mobile industry. The Android Smartphone OS driven by Google and the Open Handset Alliance provides an Open Source, royalty free, unified platform for cutting-edge Mobile Internet services and applications.

This technical course provides a broad description of the Android OS platform, including overall software architecture, the Linux kernel and driver domain, native code domain, Dalvik virtual machine, Java application framework, main system services, system initialization and startup, system services and development kit (SDK and NDK).

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KMO007 – Android Software Architecture, Continued

Course Contents

Course Contents :

Table 1: KMO007 - Course Contents

| Chapter | Description |
|--|--|
| Why Android? | <ul style="list-style-type: none"> • Mobile Internet trends • Google strategy and approach to Mobile Internet • Examples of Android applications |
| Android Architecture | <ul style="list-style-type: none"> • Android OS versions, licenses and variants • Overview of main software layers • Linux kernel • Native code domain • Java code domain |
| Fundamentals of Application Framework | <ul style="list-style-type: none"> • Main application components • Process and memory model • Application life-cycle |
| Application Development Tools | <ul style="list-style-type: none"> • IDE • Native Development Kit (NDK) • Emulator • ADB, DDMS |

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KMO007 – Android Software Architecture, Continued

Course Contents, continued

| Chapter | Description |
|----------------------------------|--|
| Android Internals | <ul style="list-style-type: none">• Linux kernel• Initialization and boot process• Dalvik VM• Display and Audio• Multimedia• Power Management |
| Android Platform Services | <ul style="list-style-type: none">• Telephony services• Wi-Fi services• Bluetooth services• Connectivity manager services• Sensor services |
| The End | <ul style="list-style-type: none">• Summary• Q&A• Evaluation |

