GSMA Consumer Masterclass

3 days training

Overview

The Internet of Things is currently taking shape and embarking on a huge growth path towards the future. It truly promises to become the next revolution after the Internet and the Mobile Internet.

The estimates are that for every person on the planet there will be at least 5 connected devices by 2020 already. In many industries this will have a transformational impact. One of the enablers is ubiquitous connectivity. Mobile network operators view the GSMA Consumer segment of the Internet of Things (IoT) as a huge growth area for them. To enable this growth they are realizing that they must also facilitate the large-scale remote management of these devices.

This is where the embedded SIM (eUICC) plays an important role. At its core, eUICC enables remote provisioning of SIM profiles, which means that the customer can switch mobile network subscription without a SIM swap. How does this technology actually work? How to leverage the opportunities? What are the impact to legacy systems, and security threats when implementing a GSMA Consumer Solution? In order to make an educated decision, you need knowledge.

Key Topics

- Standards and Associations Overview
- Trends and future developments Compliance Testing for Interoperability and Security
- Embedded SIM, how does it work?
- eUICC high level architecture
- Profile Policy Management
- Embedded SIM (ES) Interfaces
- Security Architecture and Risk Assessment
- Secure Channel Protocols
- SIMalliance Interoperable Profile format

What will you learn?

•Understand the new IoT land-
scape from a product and technical
perspective.
•Identify the need for eUICCs and
where they fit in your plans.
•Understand the various routes
available for eUICC including the
required security
•Assess the impact of GSMA
Consumer and eUICC on your busi-
ness and understand the
underlying technical architectures
•Understand the core technical
specifications

Who should attend?

•Employees of companies operat-
ing in the telecoms GSMA Consum-
er or M2M domain; for example
MNOs, MVNOs, UICC vendors,
handset manufacturers & modem
chipset manufacturers
•Business consultants, business
analysts
•Product owners, project and pro-
cess managers
•Security officers
•Innovation managers
•Solution architects

Day 1: Agenda

01 - Introduction - Consumer Day 1

02 - Standards & Associations Overview
      • What are GSMA and ETSI doing with eUICC, what are the
specifications and how are they structured?

03 - Trends and future developments
      • What is currently happening in the industry and what is
coming next?

04 - Compliance Testing for Interoperability & Security
      • How is each entity tested and what is the certification process
including GSMA SAS

05 - Embedded SIM How does it work
      • Simple overview of the system in general showing how
'Downloading and Installing a Profile' and 'Enabling a profile' works
in the Consumer architecture

06 - Embedded SIM Remote Provisioning Architecture
      • In depth overview of eUICC Profiles
      • In depth overview of eUICC
      • In depth overview of the device and LPA including LPAd and
LPAe
      • In depth overview of SM-DP+ and SM-DS

We provide in-depth training courses on other topics discussed in this Masterclass. As well as open, in-class training courses, we also provide in-company courses that are specifically designed for your needs. These courses can be hosted at your premises or at one of UL's offices:

• GSMA M2M
• EMV
• Tokenization
• MDES, VEPTS/VTS
• Remote & e-commerce
• HCE & cloud-based payments
• Security of a mobile payment application

Day 2: Agenda

01 - Introduction & Recap of Day 1

02 - Profile Policy Management
  • Creation of profile package with policy rules

03 - Embedded SIM Interfaces
  • In depth overview of functions of all the Consumer ES interfaces related to the eUICC, LPAd, LPAe, SM-DP+, SM-DS (Root and Alternative), Operator and the end User
  • Binding associated to each interface

04 - Embedded SIM Procedures
  • In depth overview of all procedures and how they use all of the functions including detailed profile package lifecycle.
  • Includes the details and use of SCP03t and SCP11a modified (Common Mutual Authentication and the Protocol for Profile Protection) in the procedures
  • Use of UL SGP.23 SM-DP+ Test Suite against UL SM-DP+ simulator to collect and analyse logs

Tool and material access before, during and after training:

•The training slides will be delivered via power point and sent in advance via email as pdf
•Students can use copies of SGP.22 to follow the training slides
•The UL SGP.23 SM-DP+ Test Suite, will be used during the training to show what is actually happening during the procedures, interfaces, binding etc.
•UL will provide a license free log viewer tool to review SM-DP+ logs captured during training
•UL will provide another license free log viewer tool to review LPAd to eUICC reference logs

Day 3: Agenda

01 - Introduction & Recap of Day 2

02 - Security Architecture and Risk Assessment
  • In-depth explanation of packaging: UPP, PPP, BPP, SBPP
  • Complete PKI explanation for SM-DP+, LPA and eUICC

03 - Secure Channel Protocols
  • Overview of GlobalPlatform Security Domains, Management of SD and SCP02 etc
  • Overview and details of GSMA SCP03t and the specially modified version for Consumer
  • Overview and details of GP SCP11a modified = GSMA Protocol for Profile Protection (PfPP) with GSMA Common Mutual Authentication (CMA) procedure

04 - SIMalliance Interoperable Profile format
  • Overview of the different versions
  • Profile package creation
  • In depth analysis of the format

    > ASN.1: show and talk through example profiles with files, perso data, application loading, PIN definitions etc
    > Overview of encoding (DER) of the profile in SM-DP+
    > Detail on the PE types to show different ones in use; e.g. App File System using Templates and Generic File Management

To know more please visit IMS.UL.COM

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