



# UL SM-DP+ SIMULATOR

## Who is it for?

UL SM-DP+ Simulator is essential for anyone in the mobile industry who wants to load eSIM profiles onto Consumer devices when they do not have a real SM-DP+ readily available.

## Why do you need it?

UL SM-DP+ Simulator loads eSIM profiles onto Consumer devices to verify that the device, its LPA and the eUICC are interoperably compatible with the eSIM profile. It can help you determine if there are issues with the device, the eSIM or the actual eSIM profile itself.

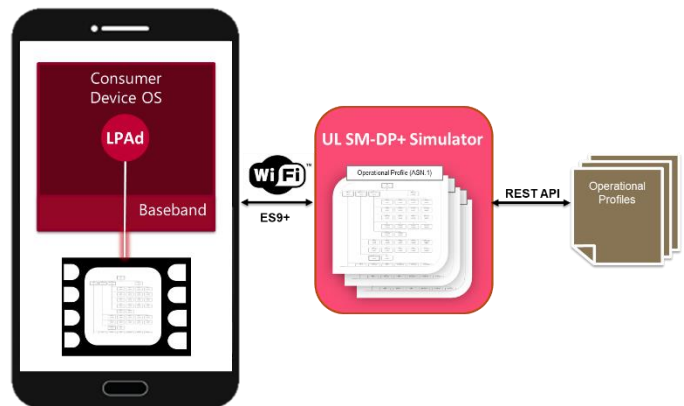
## What is inside?

UL SM-DP+ Simulator is a SM-DP+ simulator providing support for functions on GSMA ES8+ and ES9+ interfaces. ES2 functionality is currently not supported, but support for this interface may be added in the future.

**REST API** - Used to configure the SM-DP+ Simulator exactly as you need it to load the profile and its associated metadata, with your own custom SM-DP+ certificates and keys or with GSMA SGP.26 test certificates and keys used in SGP.23.

**Templating Engine** - Provides a profile template (or “dummy profile”) to be provided as input and for an actual profile including the metadata to be output, containing specific values particular to each profile subscription e.g. EF\_ICCID, EF\_IMSI, EF\_MSISDN, K-Key and OPC.

**DNS Server** - Allows you to create your own test network by connecting the test tool and the device to a Wi-Fi router and map the Activation Code’s FQDN from the device’s LPA to the IP address of the UL SM-DP+ Simulator.



## Key benefits

- Eliminates the need to book test time on your real SM-DP+ platform
- Load profiles via Wi-Fi on GSMA ES9+
- Provides REST API to help automate and integrate with your own test environment
- Provides REST API to load profiles into the SM-DP+ and schedule profile availability for testing including retry attempts
- Support for key subscription identifier inputs in profile templates to generate individual new profiles
- Quickly verify and evaluate interoperability between profiles, handsets and eSIMs
- Provides detailed logs for ES9+ (including TLS) and ES8+ for profile download
- Supports eSIM profile download via Activation Code and Default DP+ Address with or without Confirmation Code
- Download several profiles concurrently on different devices

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## Specifications

### REST API for Simulator Management

- Start and stop the simulator
- Check if the simulator is running
- List, add and remove profiles
- Reset the profile download counter

### GSMA Interfaces

- GSMA's ES8+ interface to download the profile between the SM-DP+ Simulator and the eUICC in the device
- GSMA's ES9+ interface to download the profile between the SM-DP+ Simulator and the device LPAAd via Wi-Fi
- ES2+ functionality is currently not supported, but support for this interface may be added in the future
- Logging of all TLS and RSP layer traffic on ES8+ and ES9+

### Secure Channel support

- Support for TLS and Protocol for Profile Protection (PfPP) via GSMA's ES9+ interface
- Support for GSMA's SCP03t via GSMA's ES8+ interface

### DNS Server

- Specify custom domain name (FQDN) to IP address mappings

### Procedures

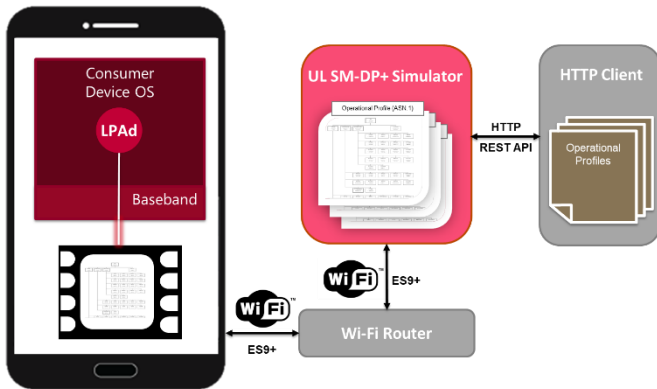
- Profile Download Initiation (equivalent behaviour)
- Common Mutual Authentication
- Profile Download and Installation
- Notifications

### Profile Templating Engine

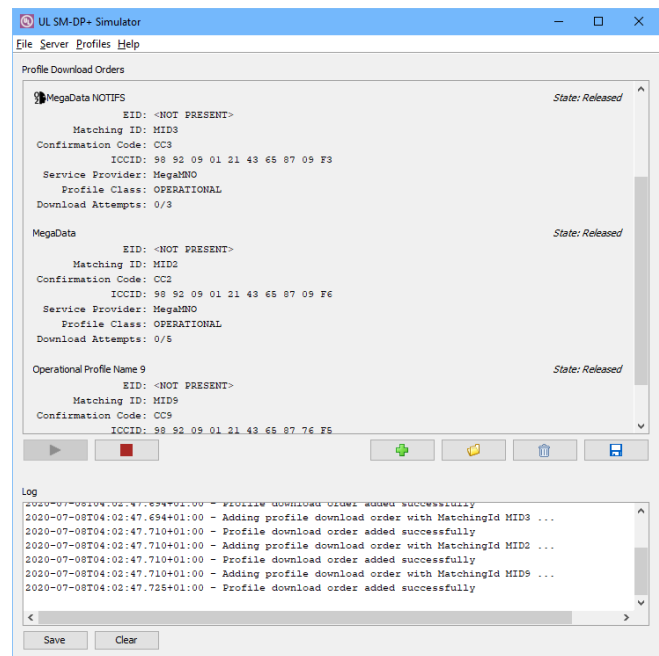
- Command line tool
- Input profile(s) as DER format
- Specify output file as DER or debug text
- Support for SIMalliance file system templates and generic file management
- Support for key subscription identifier inputs in profile templates to generate individual new profiles

### SIMalliance Interoperable Profile Format

- Support of SIMalliance 'eUICC Profile Package: Interoperability Functional Requirements specification'



UL SM-DP+ Simulator Test Environment



UL SM-DP+ Simulator

## Hardware

No hardware is provided by UL as customers only need to provide their own Wi-Fi router using the tool to perform testing.



For your sales enquiries, please contact us at [insecurity@ul.com](mailto:insecurity@ul.com), visit [ims.ul.com](http://ims.ul.com), or contact one of our resellers.

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