



DM Smart Card Requirements

Approved Version 1.0 – 30 Oct 2012

Open Mobile Alliance
OMA-RD-DM_SC-V1_0-20121030-A

Use of this document is subject to all of the terms and conditions of the Use Agreement located at <http://www.openmobilealliance.org/UseAgreement.html>.

Unless this document is clearly designated as an approved specification, this document is a work in process, is not an approved Open Mobile Alliance™ specification, and is subject to revision or removal without notice.

You may use this document or any part of the document for internal or educational purposes only, provided you do not modify, edit or take out of context the information in this document in any manner. Information contained in this document may be used, at your sole risk, for any purposes. You may not use this document in any other manner without the prior written permission of the Open Mobile Alliance. The Open Mobile Alliance authorizes you to copy this document, provided that you retain all copyright and other proprietary notices contained in the original materials on any copies of the materials and that you comply strictly with these terms. This copyright permission does not constitute an endorsement of the products or services. The Open Mobile Alliance assumes no responsibility for errors or omissions in this document.

Each Open Mobile Alliance member has agreed to use reasonable endeavours to inform the Open Mobile Alliance in a timely manner of Essential IPR as it becomes aware that the Essential IPR is related to the prepared or published specification. However, the members do not have an obligation to conduct IPR searches. The declared Essential IPR is publicly available to members and non-members of the Open Mobile Alliance and may be found on the “OMA IPR Declarations” list at <http://www.openmobilealliance.org/ipr.html>. The Open Mobile Alliance has not conducted an independent IPR review of this document and the information contained herein, and makes no representations or warranties regarding third party IPR, including without limitation patents, copyrights or trade secret rights. This document may contain inventions for which you must obtain licenses from third parties before making, using or selling the inventions. Defined terms above are set forth in the schedule to the Open Mobile Alliance Application Form.

NO REPRESENTATIONS OR WARRANTIES (WHETHER EXPRESS OR IMPLIED) ARE MADE BY THE OPEN MOBILE ALLIANCE OR ANY OPEN MOBILE ALLIANCE MEMBER OR ITS AFFILIATES REGARDING ANY OF THE IPR'S REPRESENTED ON THE “OMA IPR DECLARATIONS” LIST, INCLUDING, BUT NOT LIMITED TO THE ACCURACY, COMPLETENESS, VALIDITY OR RELEVANCE OF THE INFORMATION OR WHETHER OR NOT SUCH RIGHTS ARE ESSENTIAL OR NON-ESSENTIAL.

THE OPEN MOBILE ALLIANCE IS NOT LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF DOCUMENTS AND THE INFORMATION CONTAINED IN THE DOCUMENTS.

© 2012 Open Mobile Alliance Ltd. All Rights Reserved.

Used with the permission of the Open Mobile Alliance Ltd. under the terms set forth above.

Contents

1. SCOPE (INFORMATIVE)	5
2. REFERENCES	6
2.1 NORMATIVE REFERENCES	6
2.2 INFORMATIVE REFERENCES	6
3. TERMINOLOGY AND CONVENTIONS	7
3.1 CONVENTIONS	7
3.2 DEFINITIONS	7
3.3 ABBREVIATIONS	7
4. INTRODUCTION (INFORMATIVE)	8
5. USE CASES (INFORMATIVE)	9
5.1 IMMEDIATE PROVISIONING OF SERVICES AND APPLICATIONS PARAMETERS	9
5.1.1 Short Description	9
5.1.2 Actors.....	9
5.1.3 Pre-Conditions	10
5.1.4 Post-Conditions.....	10
5.1.5 Normal Flow	10
5.1.6 Alternative Flow	10
5.1.7 Operational and Quality of Experience Requirements.....	10
5.2 COPYING MO FROM DEVICE TO SC	10
5.2.1 Short Description	10
5.2.2 Actors.....	10
5.2.3 Pre-conditions	10
5.2.4 Post-conditions.....	11
5.2.5 Normal Flow	11
5.2.6 Alternative Flow	11
5.2.7 Operational and Quality of Experience Requirements.....	11
5.3 PORTABLE ENTERPRISE POLICY	11
5.3.1 Short Description	11
5.3.2 Actors.....	11
5.3.3 Pre-conditions	12
5.3.4 Post-conditions.....	12
5.3.5 Normal Flow	12
5.3.6 Alternative Flow	12
5.3.7 Operational and Quality of Experience Requirements.....	12
5.4 FIRMWARE / SOFTWARE DOWNLOADING	13
5.4.1 Short description	13
5.4.2 Actors.....	13
5.4.3 Pre-conditions	13
5.4.4 Post-conditions.....	13
5.4.5 Normal Flow	13
5.4.6 Alternative Flow	14
5.4.7 Operational and Quality of Experience Requirements.....	14
6. REQUIREMENTS (NORMATIVE)	15
6.1 HIGH-LEVEL FUNCTIONAL REQUIREMENTS	15
6.1.1 Security	16
6.1.2 Charging.....	17
6.1.3 Administration and Configuration	17
6.1.4 Usability.....	17
6.1.5 Interoperability.....	17
6.1.6 Privacy	18

6.2	OVERALL SYSTEM REQUIREMENTS	18
APPENDIX A.	CHANGE HISTORY (INFORMATIVE).....	19
A.1	APPROVED VERSION HISTORY	19

Tables

Table 1:	High-Level Functional Requirements	16
Table 2:	High-Level Functional Requirements – Security Items	16
Table 3:	High-Level Functional Requirements – Authentication Items	16
Table 4:	High-Level Functional Requirements – Authorization Items	16
Table 5:	High-Level Functional Requirements – Administration and Configuration Items	17
Table 6:	High-Level Functional Requirements – Usability Items	17
Table 7:	High-Level Functional Requirements – Privacy Items.....	18
Table 8:	High-Level System Requirements	18

1. Scope

(Informative)

This document defines the requirements for Device Management Smart Card (DM_SC) work stream, enhancing the role of the Smart Card started in the OMA DM v1.2 specifications (as defined in [ERELDDM]: [DMBOOT], [DMDDFDTD], [DMNOTI], [DMPRO], [DMREPU], [DMRD], [DMSEC], [DMSTDOBJ], [DMTND] and [DMTND]) and also making use of the functionalities provided by these latter specifications.

2. References

2.1 Normative References

- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”, S. Bradner, March 1997, [URL:http://www.ietf.org/rfc/rfc2119.txt](http://www.ietf.org/rfc/rfc2119.txt)

2.2 Informative References

- [ERELDDM] “Enabler Release Definition for OMA Device Management Specifications, version 1.2”. Open Mobile Alliance™. OMA-ERELD-DM-V1_2. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMBOOT] “OMA Device Management Bootstrap, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-Bootstrap-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMDDFDTD] “OMA DM Device Description Framework, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-DDF-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMNOTI] “OMA Device Management Notification Initiated Session, Version 1.2”. Open Mobile Alliance™. OMA-DM-Notification-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMPRO] “OMA Device Management Protocol, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-Protocol-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMRD] “OMA Device Management Requirements Document, Version 1.2”. Open Mobile Alliance™. OMA-RD-DM-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMREPU] “OMA Device Management Representation Protocol, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-RepPro-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMSEC] “OMA Device Management Security, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-Security-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMSTDOBJ] “OMA Device Management Standardized Objects, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-StdObj-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMTND] “OMA Device Management Tree and Description, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-TND-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMTNDS] “OMA Device Management Tree and Description Serialization, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM-TNDS-V1_2_0. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [OMADIC] “Dictionary for OMA Specifications”. Open Mobile Alliance™. OMA-ORG-Dictionary-V2. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)

3. Terminology and Conventions

3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

3.2 Definitions

Card Issuer	Issues to its customers smart cards. Telecommunications Network Operators can be card issuers, a service(s) provider and a Management Authority at the same time.
DM Message	Clear-text data string or binary WBXML representation of an atomic unit in the OMA DM Protocol [DMPRO]. It can be, for example, a bootstrap message, a firmware update package or a replace command.
Provisioning data	Provisioning data is the information that will be instantiated as Management Objects.
Smart Card	Also known as UICC (consult [OMADIC]). A Smart Card is a portable tamper resistant device with an embedded microprocessor chip. It can store data and applications along with security functions and mechanisms.
Service Provider	Entity that provides a (several) service(s)/application(s) (e.g. IMPS, Email, ...) to users.

3.3 Abbreviations

DM	Device Management
DMS	Device Management Server
MO	Management Object
OMA	Open Mobile Alliance
OTA	Over The Air
RD	Requirement Document
SC	Smart Card

4. Introduction

(Informative)

As differentiation between Device (i.e. any User terminal) types grows and Device functionality broadens, the difficulty in provisioning these Devices with service-specific parameters and software increases.

Devices equipped with a smart card may use this latter element in order to provide efficient, secure and swift provisioning information of some of its services and/or application.

This document presents use cases and requirements for Smart Card functionalities in the scope of Device Management in the following areas:

- Defining a secure dynamic provisioning of Management Objects available on the Smart Card;
- Secure management of Management Objects (including private and sensitive data) from the Smart Card. It would include: MO's update in the SC over-the-air, MO's update in the DM-client and synchronization with the SC, new MO's storage in the SC after manufacturing, etc.

5. Use Cases

(Informative)

The use cases are classified into the following categories:

- **Provisioning. Including the following cases:**
 - **Immediate Provisioning of services and applications parameters**
 - **Copying MO from device to SC**
- **DM Enablers Security. Including the following cases:**
 - **Portable Enterprise Policy**
 - **Firmware / Software approval**

5.1 Immediate Provisioning of services and applications parameters

5.1.1 Short Description

Alice has been using the IMPS and Email services on her device of model X for a while, using the Service Provider's configuration stored by the Card Issuer in a Smart Card. She receives as a gift another device of model Y in which the IMPS service and Email application are still available. As soon as Alice inserts the Smart Card inside model Y, she is instantly able to use the IMPS service and Email application without any manual configuration.

5.1.2 Actors

- **User**
- **Device**
- **Service Provider**
- **Card Issuer**
- **Smart Card**

5.1.2.1 Actor Specific Issues

- **User** wants to continue using a(several) service(s) even when changing the device.
- **Device** needs to refresh the configuration parameters of its services/applications when a new smart card is inserted and is providing a new configuration; or when the current smart card is updated with a new configuration.
- **Service Provider** wants that their services/applications remain available when the User changes her device or when the configuration of the services/applications changes
- **Card Issuer**
- **Smart Card**

5.1.2.2 Actor Specific Benefits

- **User:** flexibility in device renewal, immediate configuration and usage of services and applications
- **Service Provider:** immediate access to services and applications offered, reduced helpdesk costs
- **Card Issuer:** optimize resource usage, reduced customer care costs

5.1.3 Pre-Conditions

- Service/application configuration parameters are stored or updated in the Smart Card.

5.1.4 Post-Conditions

- Service/application is configured with the appropriate parameters; or re-configured with new parameters.

5.1.5 Normal Flow

1. User inserts Smart Card with service/application configuration parameters in a different device
2. Device reads service/application configuration parameters from the Smart Card
3. Device refreshes service/application configuration using parameters read from the Smart Card

5.1.6 Alternative Flow

1. Service/application configuration parameters are updated in the Smart Card using over-the-air mechanisms

5.1.7 Operational and Quality of Experience Requirements

- There shall be a business-relationship between the Service Provider and the Card Issuer.

5.2 Copying MO from device to SC

5.2.1 Short Description

Nuria is using on her device an application “Great Application A” from Management Authority. This application stores a MO on the device including some personalised data from Nuria and from the Management Authority.

Management Authority decides that it would be convenient to also store the MO or part of the MO in the SC to allow for example the device to be changed.

5.2.2 Actors

- **User**
- **Device**
- **Management Authority**

5.2.2.1 Actor Specific Issues

- **User:** The User would like to be able to continue using the application even in case of change of the device.
- **Management Authority:** The Management Authority is interested in being able to create a MO or a copy of the MO in the SC.

5.2.2.2 Actor Specific Benefits

- **User:** The User is able to continue using the application even in case of change of the device.
- **Management Authority:** The Management Authority is able create an MO or a copy of the MO in the SC.

5.2.3 Pre-conditions

- The device has already the application on the device.

- The application has already a specific MO in the DM tree.
- The SC is able to receive information from the device.

5.2.4 Post-conditions

- The user is able to continue using the application even in case of change of the device.
- The MO is copied in the SC.

5.2.5 Normal Flow

1. The Management Authority decides to copy a MO or part of a MO in the SC.
2. The Management Authority sends the device an order to copy a MO or part of a MO at the SC.
3. The device creates a MO or a copy of a MO in the SC.

5.2.6 Alternative Flow

- The device may check the MOs existing in a SC and compare them with the MOs currently available in the device.
- The device may keep the current MOs in the device even if there is a copy stored in the SC.
- The DM Server may decide to erase the MO of the Device and only use the copy stored on the SC.

5.2.7 Operational and Quality of Experience Requirements

n/a.

5.3 Portable Enterprise Policy

5.3.1 Short Description

In order to protect the enterprise, the B Company sets up a policy to limit in a secure way the use of some functions/resources on the employee's mobile device according to the enterprise procedures (e.g. during working hours or specific locations the use of Bluetooth, IR, USB, camera, etc may be forbidden).

The B Company defines, for example, the enterprise security policy including associated credentials that are used to establish the trust between the employee's mobile device and the enterprise administrator. This policy is stored in the Smart Cards. The B Company delivers the Smart Cards to its employees. When the employee inserts the smart card into his device, the device is configured with the corresponding enterprise policy

The B company administrator could manage the use of some functions/resources on the employee's mobile device (e.g. enable/disable, etc) based on the enterprise policy.

5.3.2 Actors

- **Device**
- **Management Authority: The B Company.**
- **User:** The employee of the B Company.

5.3.2.1 Actor Specific Issues

- **Management Authority:** The B Company wants to provide a policy to automatically limit the use of some functions/resources on the employee's mobile device.
- **User:** User can choose any kind of device he likes, and will not offend the policy of the Management Authority.

5.3.2.2 Actor Specific Benefits

- **Management Authority:** The B Company can manage the use of some functions/resources on the employee's device to protect the enterprise.
- **User:** User can easily follow the rules of the Management Authority.

5.3.3 Pre-conditions

- Enterprise policy shall be available in the Smart Card.
- Target functions/resources in the device can be enabled and disabled.

5.3.4 Post-conditions

The enterprise policy is permanently active after the association between the Smart Card and the Device; or after successful changes in the Smart Card performed by the Management Authority.

5.3.5 Normal Flow

1. The Management Authority defines the enterprise policy and associated credentials used to enable the enterprise administrator to manage the use of some specific functions/resources.
2. This policy is stored in the Smart Card, and then the Management Authority delivers the Smart Card to its employees.
3. The employee inserts the Smart card to his mobile device. The mobile device is configured using the enterprise policy and associated credentials in the Smart Card. Then the policy is valid.
4. According to the policy the device automatically executes the operation of enabling or disabling some specific functions/resources.
5. The device reports the result of the operation to the DM Server, the enterprise administrator obtains the information from the DM Server.

5.3.6 Alternative Flow

5.3.6.1 Alternative Flow1

Steps 1, 2, 3 and 5 are the same as in the Normal Flow.

4. The Management Authority sends an operation of enabling or disabling a resource through the Device Management Server to his employee's mobile device.

5.3.6.2 Alternative Flow 2

Steps 1, 2, 3 and 5 are the same as in the Normal Flow.

4. The operation can be executed as a scheduled task.

5.3.6.3 Alternative Flow 3

The following step occurs between step 3 and 4 of the normal flow.

- 3bis. The Management Authority decides to make changes over-the-air to the policy stored in the smart card.

5.3.7 Operational and Quality of Experience Requirements

- There shall be a business-relationship between the Management Authority and the Card Issuer.

5.4 Firmware / Software downloading

5.4.1 Short description

At Juan's request the Management Authority initiates a session from the SC in his device in order to perform an operation such as a firmware update or software installation. To perform this operation the SC sends one or several DM messages with a signature. Once the data has been downloaded and before installation starts, the device checks if the operation and/or the data has been approved by the Management Authority.

After this verification is performed the update or installation process continues.

5.4.2 Actors

- User
- Device
- Device Management Server
- Smart Card
- Management Authority

5.4.2.1 Actor Specific Issues

- **User:** The User does not want operations such as firmware or software updates that could cause incorrect device operation to be performed in the device.
- **Management Authority:** Management Authority does not want users and devices being affected by inappropriate and/or unauthorized operations.

5.4.2.2 Actor Specific Benefits

- **User:** The User's device operation is not affected by inappropriate and/or unauthorized operations.
- **Management Authority:** Management Authority reduces Customer Care operations necessary to repair devices affected by inappropriate and/or unauthorized operations.

5.4.3 Pre-conditions

There is a cryptographic mechanism stored in the SC and shared with the Management Authority.

The device is able to check if a signed DM message has been approved using a cryptographic mechanism compatible with OMA DM.

5.4.4 Post-conditions

n/a

5.4.5 Normal Flow

1. The Management Authority initiates an operation such as a Firmware Update or a Software Component installation or update process.
2. The Device downloads the associated data.

3. Before installation, the Device checks if the operation and/or data has been approved by the Management Authority. If approved then the installation proceeds normally.
4. If the operation and/or the data is not approved then the Device (depending on its policy)
 - a) rejects the operation, or
 - b) asks the user for confirmation before proceeding.
5. In the latter case (b), if the user accepts, the operation is performed in the device.

5.4.6 Alternative Flow

1. The Firmware Update or Software Component is not downloaded from the DM server but obtained from a different source (e.g. memory card or PC connection)

5.4.7 Operational and Quality of Experience Requirements

n/a.

6. Requirements

(Normative)

6.1 High-Level Functional Requirements

Label	Description	Enabler Release
DM-SC-GEN-1	The Smart Card SHALL be capable of storing Management Objects and provisioning data.	DELETED
DM-SC-GEN-2	The Device Management Smart Card Enabler SHALL allow the Device to determine if provisioning data is available on an installed activated Smart Card.	DM_SC 1.0
DM-SC-GEN-3	The Device Management Smart Card Enabler MAY provide a mechanism to allow authorized applications in the Device to manipulate their own provisioning data available in the smart card.	DELETED
DM-SC-GEN-4	The Device Management Smart Card Enabler SHALL provide a mechanism based on the Smart Card to be used to ensure authenticity, integrity and non-repudiation of session between Device and Smart Card.	DM_SC 1.0
DM-SC-GEN-5	The Device MAY be capable of comparing MOs in the SC with the MOs installed in the device.	DELETED
DM-SC-GEN-6	The Device Management Smart Card Enabler SHALL define a mechanism to allow retrieval and incorporation of provisioning data stored on the Smart Card into the Device configuration.	DM_SC 1.0
DM-SC-GEN-7	The Device Management Smart Card Enabler SHALL provide a mechanism that allows Device Management Server to indicate the Device to store Management Objects in the Smart Card.	DELETED
DM-SC-GEN-8	The Device Management Smart Card Enabler SHALL provide a mechanism to allow the Device to request information from the Smart Card.	DM_SC 1.0
DM-SC-GEN-9	The Device Management Smart Card Enabler SHALL allow Devices to use cryptographic mechanisms in the SC to support verification and/or signing of DM messages and, other operative data.	DELETED
DM-SC-GEN-10	The Device Management Smart Card enabler SHALL allow to group a selection of Management Objects that have some relation between them	DELETED
DM-SC-GEN-11	The Device Management Smart Card enabler SHALL allow a Device to request the selection of a specific group of Management Objects in the Smart Card	DELETED
DM-SC-GEN-12	A mechanism SHALL allow the Smart Cards to store Management Objects containing large blocks of data.	DM_SC 1.0
DM-SC-GEN-13	The Device Management Smart Card Enabler SHALL provide a discovery mechanism to allow Smart Cards and Devices to identify the support of this enabler.	DM_SC 1.0
DM-SC-GEN-14	The Device Management Smart Card Enabler SHALL provide a mechanism to allow Smart Card to indicate the Device to initiate a session with the Smart Card.	DM_SC 1.0
DM-SC-GEN-15	The Device Management Smart Card Enabler SHALL provide a mechanism to indicate to the Smart Card changes in the Device's configuration data.	DM_SC 1.0
DM-SC-GEN-16	The Device Management Smart Card Enabler SHALL provide an error handling mechanism.	DM_SC 1.0
DM-SC-GEN-17	The Device Management Smart Card Enabler SHALL define a mechanism that allows the Device to consume data directly from the Smart Card.	DM_SC 1.0
DM-SC-GEN-18	The Device Management Smart Card Enabler SHALL provide a mechanism to be used to verify cryptographically signed data.	DM_SC 1.0
DM-SC-GEN-19	The Device Management Smart Card Enabler SHALL define a mechanism that allows Management Authorities to provide policies in the Smart Card.	DELETED

DM-SC-GEN-20	The Device Management Smart Card Enabler SHALL enforce continuous provisioning from the smart card providing one or several mechanism(s) that allow the smart card to indicate to the device the presence of provisioning data in the smart card.	DM_SC 1.0
DM-SC-GEN-21	The Device SHALL look for provisioning data in the smart card at each power on.	DM_SC 1.0

Table 1: High-Level Functional Requirements

6.1.1 Security

Label	Description	Enabler Release
DM-SC-SEC-1	The Smart Card SHALL be able to securely store cryptographic parameters and mechanisms.	DM_SC 1.0

Table 2: High-Level Functional Requirements – Security Items

6.1.1.1 Authentication

Label	Description	Enabler Release
DM-SC-AUTH-1	The Device Management Smart Card Enabler SHALL support a transport mechanism that allows a variety of authentication methods to be used between the Smart Card and Device.	DM_SC 1.0
DM-SC-AUTH-2	The Device Management Smart Card Enabler SHALL ensure the successful completion of the authentication process before allowing any operation between Device and Smart Card.	DM_SC 1.0
DM-SC-AUTH-3	The Device Management Smart Card Enabler SHALL allow the Smart Card to indicate that authentication is required between the Smart Card and the Device.	DM_SC 1.0
DM-SC-AUTH-4	The Device Management Smart Card Enabler SHALL provide a mechanism to protect personal data in the Smart Card by authenticating the end-user.	DM_SC 1.0

Table 3: High-Level Functional Requirements – Authentication Items

6.1.1.2 Authorization

Label	Description	Enabler Release
DM-SC-AUT-1	Provisioning data on smart card SHALL be protected against unauthorized modification.	DM_SC 1.0

Table 4: High-Level Functional Requirements – Authorization Items

6.1.1.3 Data Integrity

No requirements identified

6.1.1.4 Confidentiality

No requirements identified

6.1.2 Charging

No requirements identified

6.1.3 Administration and Configuration

Label	Description	Enabler Release
DM-SC-ADM-1	The Device Management Smart Card Enabler SHALL provide a mechanism to allow authorized Device Management Servers to establish a data link with a Smart Card installed in a Device.	DELETED
DM-SC-ADM-2	The Device Management Smart Card Enabler SHALL provide a mechanism to allow authorized Device Management Servers to manage provisioning data available in the Smart Card.	DELETED

Table 5: High-Level Functional Requirements – Administration and Configuration Items

6.1.4 Usability

Label	Description	Enabler Release
DM-SC-USE-1	If smart card data contains user confirmation indication which explicitly requests user confirmation, the Device SHALL ask for user confirmation before incorporation of provisioning data stored on an installed activated smart card.	DM_SC 1.0
DM-SC-USE-2	If smart card data contains user confirmation indication which explicitly requests no user confirmation, the Device MUST NOT ask for user confirmation before incorporation of provisioning data stored on an installed activated smart card.	DM_SC 1.0
DM-SC-USE-3	If smart card data does not contain any user confirmation indication, the Device MAY ask for user confirmation before incorporation of provisioning data stored on an installed activated smart card.	DM_SC 1.0
DM-SC-USE-4	If the check for Management Authority approval of a signed DM message fails, the Device SHOULD reject the DM message and delete the downloaded data.	DELETED
DM-SC-USE-5	If the check for Management Authority approval of a signed DM message fails, the Device MAY ask for user confirmation before processing the DM message.	DELETED

Table 6: High-Level Functional Requirements – Usability Items

6.1.5 Interoperability

No requirements identified

6.1.6 Privacy

Label	Description	Enabler Release
DM-SC-PRV-1	The Device Management Smart Card Enabler SHALL define a mechanism to allow the Device to consume data from Smart Card without being copied in the Device.	DELETED

Table 7: High-Level Functional Requirements – Privacy Items

6.2 Overall System Requirements

Label	Description	Enabler Release
DM-SC-OSR-1	The Smart Card SHALL decide the allocation and management of space for provisioning data inside the Smart Card.	DM_SC 1.0

Table 8: High-Level System Requirements

Appendix A. Change History

(Informative)

A.1 Approved Version History

Reference	Date	Description
OMA-RD-DM_SC-V1_0-20121030-A	30 Oct 2012	Approved by TP Ref TP Doc# OMA-TP-2012-0380- INP_DM_Smart_Card_V1_0_ERP_for_Final_Approval