

CHANGE REQUEST

Title: LWM2M Software Management Object

X Public OMA Confidential

To: DM LightweightM2M

Doc to Change: OMA-TS-LWM2M_SwMgmt-V1_0-20140604-D

Submission Date: 23 Jun 2014

Classification: 0: New Functionality
1: Major Change
2: Bug Fix
3: Editorial

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Replaces: n/a

1. Reason for Change

This document proposes an initial baseline for software management object.

2. Impact on Other Specifications

None

3. Intellectual Property Rights

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4. Recommendation

DM WG to review and comment on this CR

5. Detailed Change Proposal

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Section 5

5 LWM2M Object: Software Management

LWM2M Object: Software Management

Description

This LWM2M objects provides the resources needed to perform software management on the device. Each software component is managed via a dedicated Software Management Object instance.

Object definition

Name	Object ID	Instances	Mandatory	Object URN
Software Update		Multiple	Optional	

Resource definitions

ID	Name	Operations	Instances	Mandatory	Type	Range or Enumeration	Units	Description
0	Name	R	Single	Mandatory	String			Name of the software package
1	Version	R	Single	Mandatory	String			Version of the software package
2	Package	W	Single	Mandatory	Opaque			Software package
3	Package URI	W	Single	Mandatory	String	0-255 bytes		URI from where the device can download the software package by an alternative mechanism. As soon the device has received the Package URI it performs the download at the next practical opportunity.
4	Install/Update	E	Single	Mandatory				Installs/updates software by using the software package stored in Package, or, by using the software downloaded from the Package URI. This Resource is only executable when the value of the State Resource is Downloaded.
5	Installation Options	W			String			Indication of installation options such as the target system, ...
6	Uninstall	E	Single	Mandatory	-	-		Uninstalls the software package
7	Update state	R	Single	Mandatory	Integer	1-3		Indicates current state with respect to this software update. This value is set by the LWM2M Client. 1: Idle (before downloading or after updating) 2: Downloading (The data sequence is on the way) 3: Downloaded If writing the software package to Package Resource is done, or, if the device has downloaded the software package from the Package URI the state changes to Downloaded. If writing an empty string to Package

							<p>Resource is done or writing an empty string to Package URI is done, the state changes to Idle.</p> <p>If performing the Update Resource failed, the state remains at Downloaded.</p> <p>If performing the Update Resource was successful, the state changes from Downloaded to Idle.</p> <p>4: Installed</p>
8	Update Supported Objects	RW	Single	Optional	Boolean		<p>If this value is true, the LWM2M Client MUST inform the registered LWM2M Servers of Objects and Object Instances parameter by sending an Update or Registration message after the software update operation at the next practical opportunity if supported Objects in the LWM2M Client have changed, in order for the LWM2M Servers to promptly manage newly installed Objects.</p> <p>If false, Objects and Object Instances parameter MUST be reported at the next periodic Update message.</p> <p>The default value is false.</p>
9	Update Result	R	Single	Mandatory	Integer	0-6	<p>Contains the result of downloading or updating the software</p> <p>0: Default value. Once the updating process is initiated, this Resource SHOULD be reset to default value.</p> <p>1: Software updated successfully,</p> <p>2: Not enough storage for the new software package.</p> <p>3. Out of memory during downloading process.</p> <p>4: Connection lost during downloading process.</p> <p>5: CRC check failure for new downloaded package.</p> <p>6: Unsupported package type.</p> <p>7: Invalid URI</p> <p>This Resource MAY be reported by sending Observe operation.</p>
10	Activation state	R, W	Single	Mandatory	Boolean		<p>Indicates current activation state of this software:</p> <p>0: Disabled</p> <p>1: Enabled</p>



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Software Update Consideration

If some Objects are not supported after software update, the LWM2M Client MUST delete all the Object Instances of the Objects that are not supported.