



# **Enabler Release Definition for Device Management Scheduling**

Approved Version 1.0 – 19 Jul 2011

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**Open Mobile Alliance**  
OMA-ERELED-DM\_Scheduling-V1\_0-20110719-A

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# 1. Scope

The scope of this document is limited to the Enabler Release Definition of Device Management Scheduling V1.0 according to OMA Release process and the Enabler Release specification baseline listed in section 5.

## 2. References

### 2.1 Normative References

- [DM] “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)
- [DMPRO] “OMA Device Management Protocol, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM\_Protocol-V1\_2. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DMREP] “OMA Device Management Representation Protocol, Version 1.2”. Open Mobile Alliance™. OMA-TS-DM\_RepPro-V1\_2. [URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org)
- [DM\_Scheduling\_RD] “DM Scheduling Requirement Document”, Version 1.0, Open Mobile Alliance™, OMA-RD-DM-Scheduling-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DM\_Scheduling\_AD] “DM Scheduling Architecture Document”, Version 1.0, Open Mobile Alliance™, OMA-AD-DM-Scheduling-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DM\_Scheduling\_TS] “DM Scheduling Technical Specification”, Version 1.0, Open Mobile Alliance™, OMA-TS-DM-Scheduling-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DM\_Scheduling\_MO\_DDF] “DM Scheduling MO DDF”, Version 1.0, Open Mobile Alliance™, OMA-SUP-MO\_DM\_Scheduling\_MO\_DDF-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [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)
- [SCRRULES] “SCR Rules and Procedures”, Open Mobile Alliance™, OMA-ORG-SCR\_Rules\_and\_Procedures, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

### 2.2 Informative References

- [OMADICT] “Dictionary for OMA Specifications”, Version 2.6, Open Mobile Alliance™, OMA-ORG-Dictionary-V2\_6, [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”, "Release Version Overview" and “Conformance Requirements Notation Details”, are normative, unless they are explicitly indicated to be informative.

The formal notation convention used in sections 8 and 9 to formally express the structure and internal dependencies between specifications in the Enabler Release specification baseline is detailed in [SCR RULES].

### 3.2 Definitions

|  |   |
|--|---|
| <b>Enabler Release</b>                   | Collection of specifications that combined together form an enabler for a service area, e.g. a download enabler, a browsing enabler, a messaging enabler, a location enabler, etc. The specifications that are forming an enabler should combined fulfil a number of related market requirements. |
| <b>Management Objects</b>                | A schema for configuration settings that an OMA DM client exposes to OMA DM servers for management operations defined in the OMA DM Enabler [DM]  |
| <b>Minimum Functionality Description</b> | Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.  |

### 3.3 Abbreviations

|              |                                       |
|--------------|---------------------------------------|
| <b>DCMO</b>  | Device Capability Management Objects  |
| <b>DM</b>    | Device Management                     |
| <b>ERDEF</b> | Enabler Requirement Definition        |
| <b>ERELD</b> | Enabler Release Definition            |
| <b>FUMO</b>  | Firmware Update Management Objects    |
| <b>OMA</b>   | Open Mobile Alliance                  |
| <b>OMNA</b>  | Open Mobile Naming Authority          |
| <b>SCOMO</b> | Software Component Management Objects |

## 4. Release Version Overview

The DM Scheduling Enabler V1.0 specifies the Device Management Scheduling Framework and corresponding Management Objects that can be layered on top of the OMA DM v1.2 to add seamlessly the common scheduling functionality to existing management infrastructure. The functionality, provided in the form of a building block, is fully interoperable with any other Management Objects Enablers, eg. FUMO, SCOMO, DCMO, DiagMon, allowing the management operations enabled by each of such Enablers to be performed in scheduled manners, based on either time or event, not necessarily requiring costly management sessions.

### 4.1 Version 1.0 Functionality

The minimum mandatory functionality for the DM Scheduling specification includes:

- Single-shot Time-based Scheduling

The DM Scheduling specification also specifies the following optional functionality:

- Recurrent Scheduling
- Event-based Scheduling
- Trigger Filtering
- Localized User Interaction Functions
- Gating

## 5. Document Listing for DM Scheduling V1.0

This section is normative.

| Doc Ref                         | Permanent Document Reference                 | Description   |
|---------------------------------|--|---|
| <b>Requirement Document</b>     |  |   |
| [DM_Scheduling_RD]              | OMA-RD-DM_Scheduling-V1_0-20110719-A         | Requirement Document for DM Scheduling Enabler  |
| <b>Architecture Document</b>    |  |   |
| [DM_Scheduling_AD]              | OMA-AD-DM_Scheduling-V1_0-20110719-A         | Architecture Document for DM Scheduling Enabler   |
| <b>Technical Specifications</b> |  |   |
| [DM_Scheduling_TS]              | OMA-TS-DM_Scheduling-V1_0-20110719-A         | Specification for the Scheduling Framework and corresponding Management Objects.  |
| <b>Supporting Files</b>         |  |   |
| [DM_Scheduling_MO_DDF]          | OMA-SUP-DM_Scheduling_MO_DDF-V1_0-20110719-A | DDF document for the DM Scheduling MO.<br>Working file in DTD directory:<br>file: dm_scheduling_ddf-v1_0.ddf<br>path: <a href="http://www.openmobilealliance.org/tech/omna/">http://www.openmobilealliance.org/tech/omna/</a> |

**Table 1: Listing of Documents in DM Scheduling V1.0 Enabler**



## 6. OMNA Considerations

The OMNA portal needs to add and maintain the following MO into MO registry:

| MO Identifier             | Description   | Owner | Version | MO DDF  | MO Spec                              |
|---------------------------|---------------|-------|---------|---|--------------------------------------|
| urn:oma:dm:scheduling:1.0 | Scheduling MO | DM WG | 1.0     | OMA-SUP-MO_DM_Scheduling_MO_DDF-V1_0-20110719-A | OMA-TS-DM_Scheduling-V1_0-20110719-A |

The OMNA portal needs to add and maintain the following alert type into Alert Type registry:

| Alert Root                | Alert Code | Alert Type Description  | Owner | Version | Spec                                 | MO Identifier (Optional)  |
|---------------------------|------------|---|-------|---------|--------------------------------------|---------------------------|
| urn:oma:at:scheduling:1.0 | event      | Used to claim that the alert message conveys the status reporting code  | DM WG | 1.0     | OMA-TS-DM_Scheduling-V1_0-20110719-A | urn:oma:dm:scheduling:1.0 |
|                           | result     | Used to claim that the alert message conveys the responses to the management commands                             | DM WG | 1.0     | OMA-TS-DM_Scheduling-V1_0-20110719-A | urn:oma:dm:scheduling:1.0 |
|                           | connect    | Used to claim that the alert message is used for the scheduled connection to the server initiated from the client | DM WG | 1.0     | OMA-TS-DM_Scheduling-V1_0-20110719-A | urn:oma:dm:scheduling:1.0 |

## 7. Conformance Requirements Notation Details

This section is informative

The tables in following chapters use the following notation:

- Item:** Entry in this column **MUST** be a valid ScrItem according to [SCRRULES].
- Feature/Application:** Entry in this column **SHOULD** be a short descriptive label to the **Item** in question.
- Requirement:** Expression in the column **MUST** be a valid TerminalExpression according to [SCRRULES] and it **MUST** accurately reflect the architectural requirement of the **Item** in question.

## 8. ERDEF for DM Scheduling V1.0 - Client Requirements

This section is normative.

| Item                            | Feature / Application                 | Requirement   |
|---------------------------------|---------------------------------------|---|
| OMA-ERDEF-DM_Scheduling-C-001-M | DM Scheduling Enabler<br>Client/Agent | [DM_Scheduling_TS] AND<br>[DM_Scheduling_MO_DDF] AND<br>OMA-ERDEF-DM-C-001 [DM] AND<br>DM-PRO-C-011 [DMPRO] AND<br>DMREPPRO-PCE-C-007 [DMREP] |

**Table 2: ERDEF for DM Scheduling V1.0 Client-side Requirements**

## 9. ERDEF for DM Scheduling V1.0 - Server Requirements

This section is normative.

| Item                            | Feature / Application        | Requirement   |
|---------------------------------|------------------------------|---|
| OMA-ERDEF-DM_Scheduling-S-001-M | DM Scheduling Enabler Server | [DM_Scheduling_TS] AND<br>[DM_Scheduling_MO_DDF] AND<br>OMA-ERDEF-DM-S-001 [DM] AND<br>DM-PRO-S-009 [DMPRO] |

**Table 3: ERDEF for DM Scheduling V1.0 Server-side Requirements**

## Appendix A. Change History

(Informative)

### A.1 Approved Version 1.0 History

| Reference                           | Date        | Description  |
|-------------------------------------|-------------|--|
| OMA-ERELED-DM_Sched-V1_0-20110719-A | 19 Jul 2011 | Status changed to Approved by TP:<br>OMA-TP-2011-0259-INP_Scheduling_V1_0_ERP_for_final_Approval |