



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

Candidate Version 1.0 – 17 Mar 2009

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**Open Mobile Alliance**  
OMA-ERELD-DM\_Scheduling-V1\_0-20090317-C

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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 [SCRRULES].

### 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>ERELED</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_0-20090317-C	Requirement Document for DM Scheduling Enabler
<b>Architecture Document</b>		
[DM_Scheduling_AD]	OMA-AD-DM_Scheduling-V1_0-20080626-C	Architecture Document for DM Scheduling Enabler
<b>Technical Specifications</b>		
[DM_Scheduling_TS]	OMA-TS-DM_Scheduling-V1_0-20090317-C	Specification for the Scheduling Framework and corresponding Management Objects.
<b>Supporting Files</b>		
[DM_Scheduling_MO_DDF]	OMA-SUP-DM_Scheduling_MO_DDF-V1_0-20080626-C	DDF document for the DM Scheduling MO. Working file in DTD directory: file: dm_scheduling_ddf-v1_0.ddf 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_0-20080626-C	OMA-TS-DM_Scheduling-V1_0-20080626-C

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_0-20080626-C	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_0-20080626-C	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_0-20080626-C	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 Client/Agent	[DM_Scheduling_TS] AND [DM_Scheduling_MO_DDF] AND OMA-ERDEF-DM-C-001 [DM] AND DM-PRO-C-011 [DMPRO] AND 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 [DM_Scheduling_MO_DDF] AND OMA-ERDEF-DM-S-001 [DM] AND 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 History

Reference	Date	Description
n/a	n/a	No prior version

### A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft Versions: OMA-ERELED-DM-Sched-V1_0	28 Jan 2008		New Template
	01 Apr 2008	n/a	Initial Draft Version
	22 Apr 2008	5	Document listing updated
	06 Jun 2008	5	Document listing updated
Candidate Version: OMA-ERELED-DM-Sched-V1_0	26 Jun 2008	n/a	Status changed to Candidate by TP TP ref#: OMA-TP-2008-0239- INP_DM_Scheduling_V1_0_ERP_for_Candidate_Approval
Draft Versions: OMA-ERELED-DM-Sched-V1_0	25 Feb 2009	All	Updated with agreed CRs: OMA-DM-Sched-2008-0017 OMA-DM-Sched-2009-0001R01 Document listing updated
Candidate Version: OMA-ERELED-DM-Sched-V1_0	17 Mar 2009	n/a	Status changed by TP OMA-TP-2009-0121- INP_DM_Scheduling_V1_0_ERP_for_Notification