



Management Policy MO Architecture

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Open Mobile Alliance
OMA-AD-MgmtPolicyMO-V1_0-20170328-A

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1. Scope

(Informative)

This document defines the architecture for the Management Policy Management Object v1.0 Enabler. This document fulfils the functional capabilities and information flows needed to support this Enabler as described in the Management Policy Management Object requirements document [MgmtPolicyMO-RD].

2. References

2.1 Normative References

- [DMTND] “OMA Device Management Tree and Description, Version 1.3”. Open Mobile Alliance™. OMA-TS-DM_TND-V1_3.
[URL: http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [MgmtPolicyMO-RD] “DM Management Policy MO V 1.0 Requirements”, Open Mobile Alliance™, OMA-RD-MgmtPolicyMO-V1_0,
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-DM] “OMA Device Management Protocol”, Version 1.3, Open Mobile Alliance™,,
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OSE] “OMA Service Environment”, Open Mobile Alliance™,
[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)

2.2 Informative References

- [OMADICT] “Dictionary for OMA Specifications”, Version 2.9, Open Mobile Alliance™,
OMA-ORG-Dictionary-V2_9, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-CHG-AD]. “Charging Architecture”, Version 1.1, Open Mobile Alliance™, OMA-AD-Charging-V1 1,
[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

Management Policy A rule which describes the Device Management actions to be taken when certain predefined conditions are encountered by the Device.

Kindly consult [DMDICT] and [OMADICT] for all definitions used in this document.

3.3 Abbreviations

MgmtPolicyMO Management Policy Management Object

OMA Open Mobile Alliance

4. Introduction

(Informative)

The Management Policy Management Object aims to enable remote operations for the Device according to pre-defined Management Policies downloaded by the Management Authority. Management Policy Management Object specifications will provide capabilities of processing management actions such as specifying and downloading Management Policies, composed of compound conditions and compound actions, utilising existing management objects.

The MgmtPolicyMO architecture has to support DM operations to be applied according to Management Policies stored in the device, whereby a combination of actions based on operations on existing Management Objects can be conditionally executed, with just the combined result being reported back to the DM server. The compound condition criteria, in its turn, is specified as a combination of simple logic conditions, each one based on operations on existing Management Objects.

A management tree object [DMTND] defined for MgmtPolicyMO will be used for setting up parameters and operational functionality necessary for managing a Management Policy object.

The objective of this document is to describe the architecture for MgmtPolicyMO.

4.1 Version 1.0

The MgmtPolicy 1.0 enabler release is expected to meet all the requirements defined in [MgmtPolicyMO-RD].

5. Architectural Model

5.1 Dependencies

The Management Policy Management Object depends on OMA-DM V 1.3 [OMA-DM].

5.2 Architectural Diagram

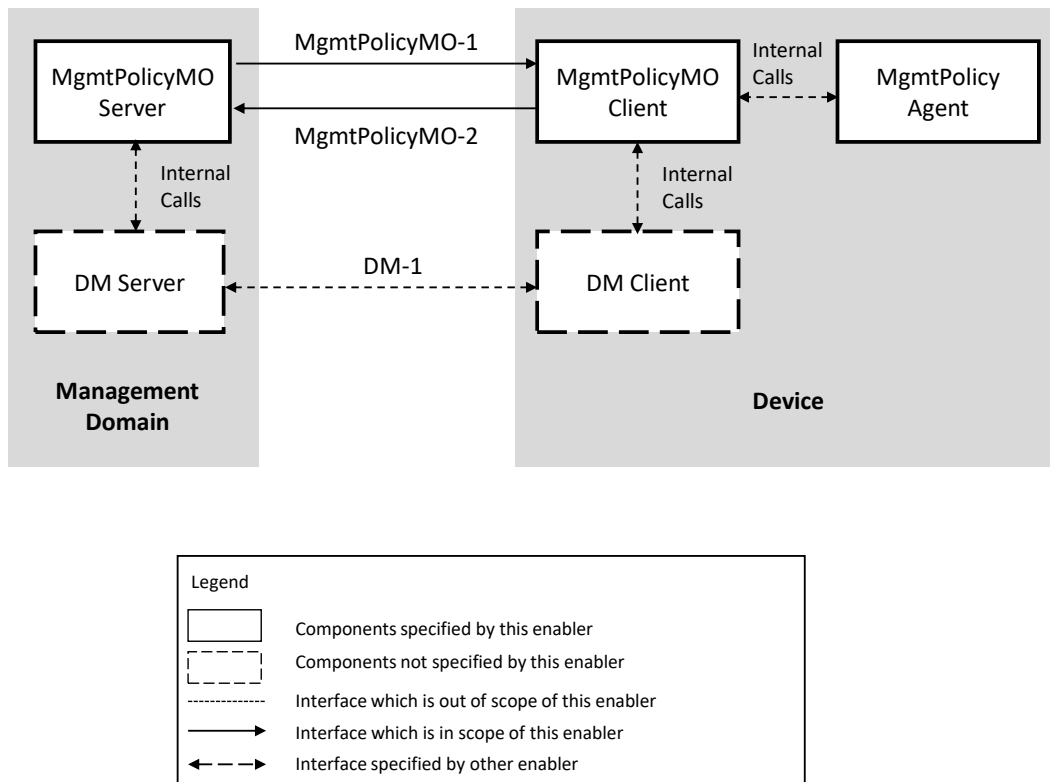


Figure 1: MgmtPolicyMO Architectural Model

5.3 Functional Components and Interfaces/reference points definition

5.3.1 Components

5.3.1.1 MgmtPolicyMO Server

The MgmtPolicyMO Server is a logical entity which is dedicated to issue MgmtPolicyMO Operations to the device or consume the MgmtPolicyMO alerts from the device.

5.3.1.2 MgmtPolicyMO Client

The MgmtPolicyMO Client is responsible for communicating the DM commands with the MgmtPolicyMO Server for the download of new Management Policies to the Device, update, activation, deactivation and removal of the existing Management Policies on the Device.

The MgmtPolicyMO Client is expected to send MgmtPolicyMO Alerts conveying a success or failure result back to the MgmtPolicyMO Server.

5.3.1.3 MgmtPolicy Agent

The MgmtPolicy Agent is the logical entity that actually runs the Management Policies stored in the Device. More specifically, it continuously monitors the Management Policy compound conditions for each active Policy in the Device and it triggers the compound actions if conditions are met. In order to do that, MgmtPolicy Agent is able to locally invoke DM commands on the various nodes of the Device DM Tree.

MgmtPolicy Agent is also able to combine the individual results from the actions and to initiate the notification of the combined result, success or failure, through the MgmtPolicyMO Client.

5.3.1.4 OMA DM Server

The OMA DM Server is defined in the OMA DM Enabler and is the subject of those specifications.

5.3.1.5 OMA DM Client

The OMA DM Client is defined in the OMA DM Enabler and is the subject of those specifications.

5.3.2 Interfaces

5.3.2.1 The MgmtPolicyMO-1 Interface

The MgmtPolicyMO-1 interface allows a MgmtPolicyMO Server to invoke MgmtPolicyMO Operations on the device using the underlying DM-1 interface.

5.3.2.2 The MgmtPolicyMO-2 Interface

The MgmtPolicyMO-2 interface allows the MgmtPolicyMO Client to send MgmtPolicyMO Alerts to the MgmtPolicyMO Server using the underlying DM-1 interface.

5.3.2.3 The DM-1 Interface

The DM-1 interface is defined in the OMA DM Enabler and is the subject of those specifications. It provides a formal interface over which Servers may send device management commands to Clients and Clients may return status and alerts to Servers.

5.4 Security Considerations

The management object defined in this enabler is dependent on the security mechanisms and protections provided by the DM enabler. No new security issues are introduced by these management objects. Readers are encouraged to review the DM enabler security specifications for more information regarding these mechanisms.

5.5 Charging Considerations

The interaction between these functional entities and the OMA Charging Enabler is described in [OMA-CHG-AD]. Description of how charging is performed is beyond the scope of the present specification.

Appendix A. Change History

(Informative)

A.1 Approved Version History

Reference	Date	Description
OMA-AD-MgmtPolicyMO-V1_0-20170328-A	28 Mar 2017	Status changed to Approved by TP TP Ref # OMA-TP-2017-0022-INP_MgmtPolicyMO-V1_0_ERP_for_Final_Approval