

OCF “Essen” – Actions on Device Reset – Core Technology WG CR 2363

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***** **Change #1 (changed text)** *****

11.5 Device management

11.5.1 Overview

Device Management includes the following functions:

- Diagnostics and maintenance
- Network Monitoring

11.5.2 Diagnostics and maintenance Resource Type

The Diagnostics and Maintenance Resource Type is intended to enable the resolution of issues encountered with the Devices while operating in the field. If diagnostics and maintenance is supported by a Device, the Core Resource “/oic/mnt” shall be supported as described in Table 29.

Table 1. Optional diagnostics and maintenance device management Core Resources

Pre-defined URI	Resource Type Title	Resource Type ID (“rt” value)	Interfaces	Description	Related Functional Interaction
“/oic/mnt”	Maintenance	“oic.wk.mnt”	“oic.if.rw”	The resource through which the device is maintained and can be used for diagnostic purposes. The Properties exposed by “/oic/mnt” are listed in Table 30.	Device Management

Table 30 defines the “oic.wk.mnt” Resource Type. At least one of the Factory_Reset, Reboot, or last error Properties shall be implemented.

Table 2. “oic.wk.mnt” Resource Type definition

Property title	Property name	Value type	Value rule	Unit	Access mode	Mandatory	Description
Factory_Reset	fr	boolean			R, W	no	When writing to this Property: false – No action (Default*) true – Start Factory Reset When reading this Property, a value of true indicates a pending factory reset. Once the factory reset has been completed, the Device shall set the value back to false. This Property is functionally equivalent to a transition to a state of Hard Reset as defined in the OCF Security Specification, Section 8.1
Reboot	rb	boolean			R, W	no	When writing to this Property: false – No action (Default) true – Start Reboot After Reboot, this value shall be changed back to the default value (i.e., false)

Last error	err	integer	HTTP error code		R	no	Last occurred error code, shall be cleared to 503 (service unavailable), when doing a Factory Reset or Reboot. All HTTP errors outside the 100, 200 or 300 range shall be stored.
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Note: * - Default indicates the value of this property as soon as the device is rebooted or factory reset

******* Change #2 (new text) *******

11.5.3 Core Behaviours on Device Maintenance State Changes

11.5.3.1 Overview

As defined in the OCF Security Specification a Device has a state machine through which it transitions during its operational lifetime.

The OCF Security Specification details actions on such state transitions for the Resources defined therein. This clause defines the actions to be taken on such state transitions for the Resources and functionality defined within this specification.

The state transitions to be considered are:

- RFNOP to Soft Reset
- RFNOP to Hard Reset
- RFNOP to RFPRO
- RFPRO to RFNOP

Table XX provides a summary of the actions to be taken in each case.

Table XX. Actions on Device State Change

	Soft Reset	Hard Reset	RFNOP -> RFPRO	RFPRO -> RFNOP
SVRs	As per OCF Security Specification section 8.5	As per OCF Security Specification section 8.1	As per OCF Security Specification section 8.3	As per OCF Security Specification section 8.4
Vertical Resources	No change	Reset to defined defaults; see clause 11.5.3.3	No change	No change
Created Resources	No change	Deleted	No change	No change
Observe Transactions	No change	Canceled; see clause 11.5.3.2	No change	Re-evaluate ACL; see clause 11.5.3.2

11.5.3.2 Handling of Observe Transactions

On a transition to hard reset all active Observe transactions shall be cancelled by the Server by sending a 'Service Unavailable' response on each active Observe transaction.

On a state transition that allows for modification of the access controls that exist against a Resource (such as from RFPRO to RFNOP) it is possible that the access controls themselves as defined within the OCF Security Specification are changed such that the original RETRIEVE that established the Observe would not have been allowed. In such instances the Server shall cancel the Observe by sending a 'Service Unavailable' response on the Observe transaction.

11.5.3.3 Reset of Resource Properties to Defined Defaults

11.5.3.3.1 Overview

On a hard or factory reset Resource Properties are reset to default values. These are commonly referred to as 'manufacturer defaults' however it is not possible in all instances to revert to such values as they may not be known or be practicable.

The default values to be applied for any Vertical Resources are defined in the following clause.

11.5.3.3.2 Defaults for Vertical Resources

Default values for any Vertical Resources exposed by a Device are up to the implementation.