

OCF “Fargo” – Actions on Device Reset - Phase 2 – Security WG CR 2875

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11.5.1 Core Behaviours on Device Maintenance State Changes

11.5.1.1 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	
Mandatory Core Resources	No change	Reset to defined defaults; see clause 11.5.3.3.	No change	No change	
Optional Core Resources	No change	Reset to defined defaults; see clause 11.5.3.4.	No change	No change	
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	

OCF Cloud	No change	See clause 11.5.3.6.	No change	No change
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11.5.1.2 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.

11.5.1.3 Reset of Resource Properties to defined defaults

11.5.1.3.1 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 the mandatory and optional Core Resources, plus any Vertical Resources are defined in clauses 11.5.1.3.2 through 11.5.1.3.4 respectively.

11.5.1.3.2 Defaults for Vertical Resources

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

11.5.1.3.3 Defaults for mandatory Core Resources

Tables YY and ZZ capture default values that shall be set for mandatory Properties of the mandatory Core Resources where those Resources contain Properties that can be changed by a Client. Note that this excludes "/oic/res" as that has no mutable Properties.

Table YY. Default values for "/oic/d"

Property	Default	Notes
"n"	""	Empty string if "/oic/con" is also exposed, otherwise not mutable.
"di"	Temporary not repeated value.	See OCF Security Specification requirements.
"icv"	Unchanged	Not mutable
"dmv"	Unchanged	Not mutable
"piid"	Temporary not repeated value.	See OCF Security Specification requirements.

Table ZZ. Default values for "/oic/p"

Property	Default	Notes
"pi"	Temporary not repeated value.	See OCF Security Specification requirements.
"mnmn"	Unchanged	Not mutable

11.5.1.3.4 Defaults for optional Core Resources

This section details the actions to be taken with respect to the optional Core Resources.

The icon Resource ("oic.r.icon") has no mutable Properties, so no action is to be taken.

Any Resources that were added to an instance of a Collection or a specialisation of a Collection (e.g. Scene List ("oic.wk.scenelist") or Scene Collection ("oic.wk.scenecollection")) by a Client shall be deleted.

The Device configuration Resource ("oic.wk.con") shall be modified in accordance with Table AA for those Properties that are implemented.

Table AA. Default values for Device configuration Resource

Property	Default	Notes
"loc"	[0.0,0.0]	
"locn"	""	Empty string
"c"	""	Empty string
"r"	""	Empty string
"ln"	[{}]	One item array with an empty object.
"dl"	Defined by the manufacturer	Recommend the primary language tag for the region into which the Device is marketed (e.g. "en" for primarily English speaking countries).

11.5.1.4 Handling of OCF Cloud

On a hard reset the Device if registered to an OCF Cloud shall de-register from the OCF Cloud in accordance with the procedures in the OCF Security Specification, clause 13.10.

Further, on a hard reset the CoAPCloudConf Resource ("oic.r.coapcloudconf") shall be modified in accordance with Table BB for those Properties that are implemented.

Table BB. Default values for CoAPCloudConf Resource

Property	Default	Notes
"apn"	""	Empty string, only if no manufacturer default exists, in which case it reverts to that default or is unchanged.
"cis"	"coaps+tcp://127.0.0.1"	Or other valid but non-resolving URI.
"at"	""	Empty string, only if no manufacturer default exists, in which case it reverts to that default or is unchanged.
"sid"	Temporary not repeated value or "00000000-0000-0000-0000-000000000000"	
"clec"	0	No Error.

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