

OCF 2.0 – Alerts and Alert Collections – Core Technology WG CR 1969

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***** **Change #1** *****

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IETF RFC 5424, *The Syslog Protocol*, March 2009

<https://tools.ietf.org/html/rfc5424>

***** **Change #2** *****

Note: new level 3 definition in section 3.1 (T&Ds)

1.1.1 Alert

information provided by the Device by means of a specialised Resource Type that provides details with regard to potential problems, issues, or Device status of interest on which action can be taken.

***** **Change #3** *****

1.2 Alerts

1.2.1 Overview

Alerts provide a means by which a Device provides information to an interested party with regard to error or other conditions that the Device is experiencing. An Alert contains human readable text that is dependent on the Device itself and the condition being reported. A Device may expose discrete instances of an Alert Resource Type ("oic.r.alert") or may also expose Alerts within an Alert Collection ("oic.r.alertcollection"). If the instance of "oic.r.alertcollection" is observable (see section 7.8.2.1.2) then a Client may Observe the Collection using the mechanisms defined in section 11.4. As the Device adds and removes Alerts from the Collection notifications may be generated for any registered Observers, the format of which is dependent upon the Interface used for the initial Observe, see section 7.6.3.

1.2.2 Resource Types

The Alert and Alert Collection Resource Types are as defined in Table XX.

Table XX. Optional Alert Core Resources

Example URI	Resource Type Title	Resource Type ID ("rt" value)	Interfaces	Description	Related Functional Interaction
"/example/alertURI"	Alert	"oic.r.alert"	"oic.if.r", "oic.if.baseline"	The Resource through which the Device exposes Alerts. The Properties exposed by "oic.r.alert" are listed in Table 30.	Alerts
"/example/alertcollection"	Alert Collection	"oic.r.alertcollection"	"oic.if.ll", "oic.if.b",	A specialisation of a Collection that contains only instances of "oic.r.alert" that may be Observed by a Client in order to	Alerts

onURI			"oic.if.baseline"	consume Alerts as they are created by the Device.	
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Table YY defines the details for the "oic.r.alert" Resource Type.

Table YY. "oic.r.alert" Resource Type definition

Property title	Property name	Value type	Value rule	Unit	Access mode	Mandatory	Description
Category	category	string			R	yes	Device defined category for the Alert (e.g. 'System', 'I/O')
Generated Time	generatedtime	date-time			R	yes	RFC 3339 formatted time at which the Alert was generated.
Originator ID	originatorid	string			R	yes	Identity of the originator of the Alert. May be the Device ID of the Device or some other Device defined identity.
Severity	severity	integer	[0,7]		R	yes	RFC 5424 defined severity value
Subject	subject	array			R	no	Human-friendly subject of the Alert in one or more languages. This property is an array of objects where each object has a 'language' field (containing an IETF RFC 5646 language tag) and a 'value' field containing the subject of the Alert name in the indicated language.
Account ID	accountid	string			R	no	Identity of the account with which the Device generating this Alert is associated.

The Alert Collection ("oic.r.alertcollection") Resource Type defines no Properties additional to those defined for all instances of a Collection in Table 9. However the Alert Collection does impose restrictions of the values that shall be populated in the "rt" and "rts" Properties. These are described in Table ZZ below.

Table ZZ. "oic.r.alertcollection" Resource Type definition

Property title	Property name	Value type	Value rule	Unit	Access mode	Mandatory	Description
Links	links	Array	See Table 9		R	Yes	See Table 9
Resource Type	rt	array	["oic.r.alertcollection"]		R	Yes	See Table 4.
Resource Types	rts	array	["oic.r.alert"] or ["oic.r.alert", "oic.r.value.conditional"]		R	Yes	See Table 9

1.2.3 Example of Use

Consider a Device that is capable of generating Alerts; it exposes an empty instance of an Alert Collection ("oic.r.alertcollection"); that is the array of Links (the "links" Property) contains no items.

As the Device under whatever conditions generates Alerts, the Device adds a Link to the Alert Resource in the instance of an Alert Collection. A Client that has discovered the Device and is observing the Alert Collection using the links list Interface ("oic.if.ll") will receive a notification containing the complete Alert Collection (not just any Links that were added). It is the responsibility of the Client to determine which Links were added (or removed if the Alert was removed); noting that the "generatedtime" Property may be used to determine the generated order. The Client then retrieves the Alert itself via a RETRIEVE to the 'href' Link Parameter in the newly added Link to the Collection.

See section <Reference to Annex> for an example of an Alert Resource and the applicable schema.

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