

ISO/IEC 30118-10:2021-10 (E)

Information technology - Open Connectivity Foundation (OCF) Specification - Part 10: Cloud API for cloud services specification

Contents		Page
Foreword		vi
Introduction		vii
1	Scope	1
2	Normative references	1
3	Terms, definitions and abbreviated terms	2
3.1	Terms and definitions	2
3.2	Symbols and abbreviated terms	2
4	Document conventions and organization	3
4.1	Conventions	3
4.2	Notation	3
5	Overview	4
5.1	Introduction	4
5.2	OCF Cloud architecture alignment with ISO IEC 17789	5
5.3	General OCF Cloud API for Cloud Services elements	5
5.4	Cloud to Cloud operational overview	6
5.4.1	Introduction	6
5.4.2	Conceptual architecture	6
5.4.3	Authorizing OCF Cloud connectivity	6
5.4.4	Synchronization of user's set of Devices	7
5.4.5	Keeping up-to-date: Notifications of changes on other OCF Clouds	7
5.4.6	Handling of requests and responses for connected Devices	7
6	Authentication and authorization	7
7	Account linking API	8
7.1	General	8
7.2	OAuth2.0 access token scopes	9
8	Devices API	10
8.1	Introduction	10
8.2	Parameters supported in Requests	10
8.3	Retrieve all Devices	11
8.3.1	Summary	11
8.3.2	Request and response payload	12
8.3.3	Responses	13
8.4	Retrieve one Device	13
8.4.1	Summary	13
8.4.2	Request and response payload	14
8.4.3	Responses	14
8.5	Retrieve specific Resource	15
8.5.1	Summary	15
8.5.2	Request and response payload	15
8.5.3	Responses	16
8.6	Update a Resource on a Device	16
8.6.1	Summary	16

8.6.2	Request and response payload	17
8.6.3	Responses	17
9	Events API	18
9.1	Introduction	18
9.2	Events authentication	19
9.2.1	Introduction	19
9.2.2	Create event signature	19
9.2.1	Verify the event signature	19
9.3	Parameters supported	20
9.4	Events API subscription and notification payload definitions	20
9.4.1	Subscription request	20
9.4.2	Subscription response	21
9.4.3	Notification request	22
9.4.4	Notification response	24
9.5	Subscribe and unsubscribe to devices level event types	24
9.5.1	Summary	24
9.5.2	Request and response payload	25
9.5.3	Responses	25
9.6	Subscribe and unsubscribe to device level events	25
9.6.1	Summary	25
9.6.2	Request and response payload	26
9.6.3	Responses	26
9.7	Subscribe and unsubscribe to resource level events	27
9.7.1	Summary	27
9.7.2	Request and response payload	27
9.7.3	Responses	28
9.8	Notification of devices level events	28
9.8.1	Summary	28
9.8.2	Request and response payload	29
9.8.3	Responses	29
9.9	Notification of Device level events	29
9.9.1	Summary	29
9.9.2	Request and response payload	30
9.9.3	Responses	30
9.10	Notification of Resource level events	30
9.10.1	Summary	30
9.10.2	Request and response payload	31
9.10.3	Responses	31
Annex A	Representative flows	32
A.1	Introduction	32
A.2	OAuth2.0 application registration	32
A.3	Account linking	32
A.4	Retrieval of all Devices	33
A.4.1	Summary	33
A.4.2	Flow	33
A.4.3	Flow description	34
A.5	Retrieval of a single Device	34
A.5.1	Summary	34
A.5.2	Flow	34
A.5.3	Flow description	35
A.6	Retrieval of a single Resource	35
A.6.1	Summary	35
A.6.2	Flows	35
A.7	Update of a single Resource	37
A.7.1	Summary	37
A.7.2	Flows	37
A.8	Establishment of new subscription request	38

A.8.1	Summary	38
A.8.2	Flows	38
A.9	Event generated for a subscription	39
A.9.1	Summary	39
A.9.2	Flows	39
A.10	Addition of new registration	40
A.10.1	Summary	40
A.10.2	Flows	40
A.11	Removal of existing device registration	40
A.11.1	Summary	40
A.11.2	Flows	40
Annex B	Open API Definition	42
B.1	OCF Cloud API for Cloud Services	42
B.1.1	Supported APIs	42
B.1.2	OpenAPI 2.0 definition	43