

HID Mobile Access®

API 2.2 Specification

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For technical support, please visit: <https://support.hidglobal.com>.

What's new

Date	Description	Revision
October 2021	- Section 1.1 Document scope. Added link to primary documentation space for HID Origo APIs. - Section 4.1 Create User. Added attributes for "Phone no (value)" and "Phone no (type)". - Section 9.1 Register for Callback. Added link to new and improved Callback API. - Section 14 Known Limitations. New section added.	B.6

A complete list of revisions is available in [Revision history](#).

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Section 01

Introduction

1.1 Document scope

We are improving our products and documentation. Going forward the primary documentation space for HID Origo APIs will be, [HID Origo API Documentation \(hidglobal.com\)](https://hidglobal.com).

The HID Mobile Access® API is a web service that enables developers to integrate HID Mobile Access administration capabilities such as user, device and credential management into custom applications.

This document provides the specification for Mobile Access API 2.2 and also covers high level architecture, error codes and other technical specifications.

1.2 Target audience

This API specification is intended for software developers. It is assumed the reader is familiar with developing applications that consume web services through HTTP requests.

1.3 Glossary of terms

Term	Description
Credential Container	A device that is capable of storing Credentials, for example, mobile phones, tablets and wearables. Credential Containers are registered by consuming an Invitation Code in an application embedding the HID Mobile Access SDK. Also referred to as device, mobile device.
Invitation Code	Invitation Codes are issued to users as the first step in registering a new device (see Credential Container). Invitation Codes consist of a 16-character alphanumeric sequence and are used to authenticate devices and associate them with the relevant user. Also referred to as Invitation, UserInvitation.
Mobile ID (also referred to as Credential)	Virtual representation of a Seos® credential, stored securely within a Credential Container. Also referred to as Credential.
Part Number	A Part Number refers to a type of Mobile ID available for issuance for a given organization. One organization may have one or many Part Numbers available for selection. The Part Numbers available for an organization are listed in the 'Available Mobile IDs' section in the portal. Each Part Number has a reference, such as 'MOBILE-ID_FTPN_1000' or 'CRD633ZZ-01234', which is referenced when requesting issuance of Mobile IDs.
SCIM	System for Cross-Domain Identity Management: a widely adopted specification for managing user identities in cloud-based applications. http://www.simplecloud.info/#Overview

1.4 Version information

This section outlines the newly added APIs and schemas in Version 2.2.

Term	Description	Comments
Notification	urn:hid:scim:api:ma:2.2:Notification	Notifications added for Subscription State and Period State changes.
License Info	urn:hid:scim:api:ma:2.2:LicenseInfo	New schema added. Corresponds to subscription details of an Organization/user.
Users	Get User	Added key LicenseInfo to JSON response description and updated the sample response payload. Also includes Title, Suffix details of user and Photo Identity details.
Part Numbers	Get Part Numbers	Added eight keys to JSON response description and updated the sample response payload.
Licenses	Get Licenses	New request. Used by Subscription Mode organizations to get details of their Subscriptions.
Error Codes	Application Code Errors	Added response code 412 PRECONDITION FAILED for API Services Enroll User, Create Invitation and Issue Credential. Added new API Services Get Organization and Get Licenses.
Photo	urn:hid:scim:api:ma:2.2:User:Photo	New schema added. Corresponds to Photo Identity details of a user.
Photo	Upload Photo Identity	New request. This uploads the Photo Identity for an existing user.
Photo	Preview Photo Identity	New request. This previews the Photo Identity uploaded to a user.
Photo	Upload Photo Identity Status	New request. This updates the Photo Identity status for a user.
Photo	Delete Photo Identity	New request. This deletes the Photo Identity of a user.
Users	Create User	Added new fields - Title, Suffix details of a user.
Users	Update User	Added new fields - Title, Suffix details of a user.

1.5 Migration steps

1.5.1 Migrate from version 1.0 to 2.0

The changes required to migrate from version 1.0 to 2.0 of HID Mobile Access API are outlined below:

Type of change	Rev 1.0	Rev 2.0	Impact to APIs
Content-Type Header and Accept Header in HTTP requests	application/vnd.assaabloy.ma.credential-management-1.0+json	application/vnd.assaabloy.ma.credential-management-2.0+json	All APIs
HTTP POST and PUT Request Body data schema	application/vnd.assaabloy.ma.credential-management-1.0+json	application/vnd.assaabloy.ma.credential-management-2.0+json	Create User, Create Invitation, All Search APIs, Issue Credentials, Update User, Callback Registration and Update APIs
Error Schema	urn:hid:scim:api:ma:1.0:Error	urn:hid:scim:api:ma:2.0:Error	Error Responses

New APIs added in Rev 2.0:

- **Get Customer**
- **Get Licenses**

1.5.2 Migrate from version 2.0 to 2.1

The changes required to migrate from version 2.0 to 2.1 of HID Mobile Access API are outlined below:

Type of change	Rev 1.0	Rev 2.0	Impact to APIs
Content-Type Header and Accept Header in HTTP requests	application/vnd.assaabloy.ma.credential-management-2.0+json	application/vnd.assaabloy.ma.credential-management-2.1+json	All APIs
HTTP POST and PUT Request Body data schema	application/vnd.assaabloy.ma.credential-management-2.0+json	application/vnd.assaabloy.ma.credential-management-2.1+json	Create User, Create Invitation, All Search APIs, Issue Credentials, Update User, Callback Registration and Update APIs
Error Schema	urn:hid:scim:api:ma:2.0:Error	urn:hid:scim:api:ma:2.1:Error	Error Responses

New APIs added in Rev 2.1:

- **Upload Photo Identity**
- **Preview Photo Identity**
- **Upload Photo Identity Status**
- **Delete Photo Identity**

1.5.3 Migrate from version 2.1 to 2.2

The changes required to migrate from version 2.1 to 2.2 of HID Mobile Access API are outlined below:

Type of change	Rev 1.0	Rev 2.0	Impact to APIs
Content-Type Header and Accept Header in HTTP requests	application/vnd.assaabloy.ma.credential-management-2.1+json	application/vnd.assaabloy.ma.credential-management-2.2+json	All APIs
HTTP POST and PUT Request Body data schema	application/vnd.assaabloy.ma.credential-management-2.1+json	application/vnd.assaabloy.ma.credential-management-2.2+json	Create User, Create Invitation, All Search APIs, Issue Credentials, Update User, Callback Registration and Update APIs
Error Schema	urn:hid:scim:api:ma:2.1:Error	urn:hid:scim:api:ma:2.2:Error	Error Responses

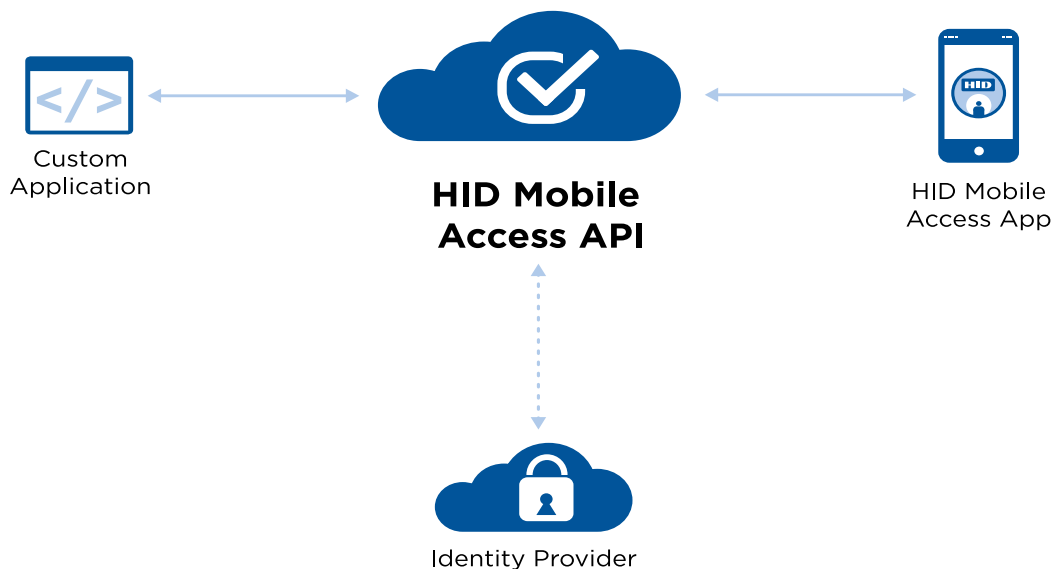
Enhancements on Custom SIO to APIs in Rev 2.2:

- **Create User**
- **Create Invitation**
- **Issue Credential**
- **Get User**
- **Get Credential**
- **Get Credential Container**
- User Action Metadata Schema
- Credential Metadata Schema

Section 02

Overview

2.1 Architecture



Entity	Description
Custom Application	Application consuming HID Mobile Access API to manage the enrollment and provisioning of Mobile IDs.
HID Mobile Access API	HID provides a rich feature set of REST API endpoints that can be leveraged/integrated in Mobile Access Portal application for managing the enrollment and provisioning of Mobile IDs to its end users.
Identity Provider	An identity provider is a separate system entity that creates, maintains, and manages identity information for principals while providing authentication services to relying party applications within a federation or distributed network.
HID Mobile Access App	Mobile application which implements the HID Mobile Access SDK.

2.2 API functionality

2.2.1 Base URI

All URLs referenced in the API documentation begin with the following base URL.

```
https://ma.api.assaabloy.com/credential-management
```

2.2.2 Organization ID

This is the unique Organization ID which needs to be shared with the API Consumer to construct the URL during API integration. It is mandatory in the request.

```
{Base URI}/customer/{organization_id}/
```

2.2.3 Resource format

1. The Mobile Access REST API currently supports JSON resource representations only. These API use HTTP GET, POST, PUT, and DELETE methods. In this version of APIs PATCH is not implemented.
2. All requests need to include the following for Content-Type:

```
application/vnd.assaabloy.ma.credential-management-2.2+json
```

2.2.4 Accept header support

The API has limited support for version control using a HTTP Accept header in place of Content-Type where no request payload is included. To make use of this functionality, include the following HTTP header with the request:

```
Accept: application/vnd.assaabloy.ma.credential-management-2.2+json
```

This was previously known to affect integrations using .NET frameworks for interacting with the API.

2.3 Authentication and Authorization

All HID Origo API endpoints require authentication using an [OAuth 2.0](#) Bearer Token (**access_token**). Every request to the API must include a valid token in an **Authorization** HTTP header with the following format:

```
Authorization: Bearer {access_token}
```

These tokens are generated on behalf of System Accounts, which are created and managed with the HID® Origo™ Management Portal using the **Organization Administration** view. The **Organization Administration** view is available to users who are assigned the Organization Administrator role.

2.3.1 Identity Provider information

The following table provides a summary of the Identity Provider properties.

Endpoint	https://api.origo.hidglobal.com/authentication/customer/{organization-id}/token
OAuth 2.0 support	Yes
OpenID Connect support	Partial
Password Authentication	Yes
PKI Authentication	Yes
System Account Name Format	{organization_id}-OSVR123...
Token Lifetime	1h (3600s)
Rate Limits	50 requests per five minutes based on source IP address

2.3.2 Password-Based Authentication

The following sample request and sample response demonstrates generating a Bearer Token using the **client_credentials** grant type.

Note: Any line breaks are added for readability only.

Sample Request: client_credentials

```
POST /authentication/customer/{organization_id}/token HTTP/1.1
Host: api.origo.hidglobal.com
Content-Type: application/x-www-form-urlencoded

client_id=12345-OSRV123456789
&client_secret=K5bkps7mtnq7VDQr
&grant_type=client_credentials
```

Sample Response: client_credentials

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.origo.idp-management-1.0+json
{
  "access_token": "78H0fQBBBXI3C22rm35DaTrjnKnTpz3WnSJ+INqE",
  "id_token": "eyJraWQiOiIx...78Q",
  "token_type": "Bearer",
  "expires_in": 3600
}
```

2.3.3 Certificate-based authentication

Certificate-based authentication is supported through the use of [JSON Web Tokens \(JWT\)](#).

Prerequisites

The System Account identifier and a token URL are used as input to the signed token. The following instructions provide guidance on how to configure a System Account for PKI authentication and to capture the properties to be included in the token.

1. Create (or edit) a System Account and assign the appropriate role(s).
2. In the **PKI certificate** section, upload the PKI certificate (public key):

System Information

Please create a system account below to access the HID Origo Mobile Identities portal via SDK.

Client ID

1234-OSRV123456789

Select the roles to be assigned to this system account user

Service	Active
Mobile Identities	☒
Connected Architecture	☐
Connected Architecture: Certificate Manager	☐

Credential type

☒ PKI credential (Recommended for better security)
 ☐ Password

PKI certificate

Browse...

certificate.pem

3. Save the settings to return to the **Organization Administration** screen.
4. In the **System Accounts** section, obtain the Client ID and Token URL.

System Accounts

ADD SYSTEM ACCOUNT

System Accounts are used to authenticate requests to the HID Origo APIs.

↑ User ID	Actions
1234-OSRV123456789 Credential Type PKI certificate Roles MobServer Token URL https://auth-us.api.hidglobal.com/idp/1234567890abcdefgh/authn/token	

<< First

< Previous

1

2

Next >

Last >>

10 items per page

Showing 1 - 2 of 2 results

Generate a Signed JWT

With the System Account created and a PKI certificate uploaded, a JWT can be created and signed. The token needs to include certain claims:

Property	Description
sub	Subject: The identity the token was issued for. In this case, the System Account Client ID.
iss	Issuer: The entity that issued the token. In this case, the System Account Client ID.
aud	Audience: The target audience for the token. Should be set to the value of Token URL captured for the System Account.
nbf	Not Before: A timestamp (represented as seconds since January 1, 1970, 00:00:00 GMT) indicating the moment after which the token can be validated. Typically set to the current timestamp, minus a few milliseconds.
iat	Issued At: The time at which the token was issued. Typically the same value as nbf .
exp	Expiration: The time at which the token will expire. For example an hour later than iat .
jti	JWT Identifier: A random value to ensure the token is unique. The recommendation is to use a 128 bits minimum alphanumeric random, such as a RFC-4122 UUID .

Below is a sample payload using the values from previous examples. This should be signed using the private key to produce a valid JWT:

```
{
  "sub": "1234-OSRV123456789",
  "iss": "1234-OSRV123456789",
  "aud": "https://auth-us.api.hidglobal.com/idp/1234567890abcdefgh/authn/token",
  "nbf": "1597219200", // 2020-08-12 08:00 UTC
  "exp": "1597222800", // 2020-08-12 09:00 UTC
  "jti": "06aa8891-5ea9-4425-8840-52f657fe768b",
  "iat": "1597219200" // 2020-08-12 08:00 UTC
}
```

This payload is then signed using the private key and converted to a Base64 encoded string which can be used in API requests. Additional guidance and sample applications in multiple languages are available as part of the [HID Global Authentication Service Documentation](#).

Sample Request: client_assertion

```
POST /authentication/customer/{organization_id}/token HTTP/1.1
Host: api.origo.hidglobal.com
Content-Type: application/x-www-form-urlencoded
```

```
client_type=client_credentials
&clientassertion=ZXlKMdVYQWlPaUpLVjFRaUxDSmhir2NpT2lKSVV6STFOaUo5LmV5SnpkV0lpT2lJeE1qTTBMVTlUVWxZeE1qTTBOVfKzT0RraUxDSnBjM0lpT2lJeE1qTTBMVTlUVWxZeE1qTTBOVfKzT0RraUxDSmhir2NpT2lKb2RIUndjem92TDJGMWRH
Z3RkWE1lWhCcExtahBAr2RzYjJKaGJDNWpiMjB2YVdSd0x6RXlNe1ExTmptjNE9UQmhZbU5rWldabmFDOWhkWFJvYmk5MGIydGx
iaU1zSW01appSTZJakUxT1RjeU1Ua3lNREFPtENKbGVIQWlPaU14TlRrM01qSXlPREF3SWl3aWwFuUnBJam9pTURaaFlUZzRPVE
V0TldWae9TMBORekxTFRnNE5EQXROVEptTmptVM1ptVTNOamhpSWl3aWwFXRjBJam9pTVRVNU56SXhpVEl3TUNKOS5IY05tdmRjb
EZsX2VzeG9aZXo1M0prVTlURWNSZGFsZ2NzYmUwWEJwR3pz
```

Sample Response: client_assertion

```
HTTP/1.1 200 OK
Content-Type: application/json; charset=UTF-8
{
  "access_token": "78HOfQBBBXI3C22rm35DaTrjnKnTpz3WnSJ+INqE",
  "id_token": "eyJraWQiOiIx...78Q",
  "token_type": "Bearer",
  "expires_in": 3600
}
```

2.3.4 Token Expiry

All tokens have an expiry threshold and a session timeout. The **expires_in** property will include the maximum lifetime of the token in seconds, which is currently **3600** but is subject to change. Developers are encouraged to make this value configurable or dynamically read it from the token. Attempting to use an expired token will result in a **HTTP 401 Unauthorized** response. Any application consuming HID Origo APIs must support requesting a new token on expiry.

Note: In addition to the expiry threshold, HID Origo will consider authentication tokens expired if not used within five minutes of creation.

2.3.5 Application Identifiers

In addition to a System Account and associated credentials, an Application Identifier and Version must be provided with each request using custom HTTP headers:

- Application-ID
- Application-Version

The Application Identifier is provided and approved for use in production once the application has been certified through the [Technology Partner Service program](#).

A sample request including the Application-ID and Application-Version headers is provided below:

```
GET /credential-management/customer/{organization_id}/users
Host: ma.api.assaabloy.com
Authorization: Bearer 78HOfQBBBXI3C22rm35DaTrjnKnTpz3WnSJ+INqE
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Application-ID: HID-Sample-Application
Application-Version: 2.3
```

2.4 SCIM V2 Standard Compliance Endpoints

2.4.1 Users

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/users/{user_id} {Base_URI}/customer/{organization_id}/users	Get/List User details
POST	{Base_URI}/customer/{organization_id}/users	Enroll User in HID Mobile Access
PUT	{Base_URI}/customer/{organization_id}/users/{user_id}	Full Update of User details
DELETE	{Base_URI}/customer/{organization_id}/users/{user_id}	Delete User in HID Mobile Access
POST	{Base_URI}/customer/{organization_id}/users/.search	Search for Users

2.4.2 Invitations

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/invitation/invitation_id {Base_URI}/customer/{organization_id}/users/{user_id}/invitation	Get/List Invitation details
POST	{Base_URI}/customer/{organization_id}/users/user_id/invitation	Create Invitation
POST	{Base_URI}/customer/{organization_id}/users/{user_id}/invitation/.search	Search Invitation
POST	{Base_URI}/customer/{organization_id}/invitation/{invitation_id}/email	Email the Invitation code
DELETE	{Base_URI}/customer/{organization_id}/invitation/{invitation_id}	Cancel Invitation

2.4.3 Credential Containers

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/credential-container/{credential_container_id} {Base_URI}/customer/{organization_id}/users/{user_id}/credential-container	Get/List Credential Container details
DELETE	{Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}	Delete Credential Container. All the Credentials associated to that Credential Container will be revoked automatically and then Credential Container will be deleted.

2.4.4 Part Numbers

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/partnumber/{part_number_id} {Base_URI}/customer/{organization_id}/part-number	Get/List available Part Number details
POST	{Base_URI}/customer/{organization_id}/part-number/.search	Search Part Numbers
GET	{Base_URI}/customer/{organization_id}/part-number/ {part_number_id}/credential	List all Credentials of a Part Number
POST	{Base_URI}/customer/{organization_id}/part-number/ {part_number_id}/credential/.search	List all Credentials of a Part Number based on criteria and requested attributes

2.4.5 Credentials

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/credential/{credential_id} {Base_URI}/customer/{organization_id}/credentialcontainer/ {credential_container_id}/credential	Get Credential details. List all the Credentials in a device.
POST	{Base_URI}/customer/{organization_id}/credentialcontainer/ {credential_container_id}/credential	Picks default part number (if Part Number is not specified) and assigns next available Credential to Credential Container (if Credential is not specified).
DELETE	{Base_URI}/customer/{organization_id}/credential/{credential_id}	Revoke specified Credential from Credential Container

2.4.6 Callback

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/callback-registration/ {callback_registration_id}	Get Registered Callback URL details
POST	{Base_URI}/customer/{organization_id}/callback-registration	Registers Callback URL for the Service Consumer
PUT	{Base_URI}/customer/{organization_id}/callback-registration/ {callback_registration_id}	Update the Callback details of Service Consumer
DELETE	{Base_URI}/customer/{organization_id}/callback-registration/ {callback_registration_id}	Unregisters the Callback from Service Provider

2.4.7 Meta Endpoints

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/serviceProviderConfig	Details what SCIM support is available from the service
GET	{Base_URI}/customer/{organization_id}/resourceTypes	List the types of resources available, if any
GET	{Base_URI}/customer/{organization_id}/schemas/{schema}:{string}	Lists the supported schemas for the resource types, or just the one requested

2.4.8 API Version

HTTP Method	Request URI	Description
GET	{Base_URI}/customer/{organization_id}/sdk-version	Get MA API Version details

2.4.9 Photo ID

HTTP Method	Request URI	Description
POST	{Base_URI}/customer/{organization_id}/users/{user_id}/photo	Upload Photo Identity for User
GET	{Base_URI}/customer/{organization_id}/users/{user_id}/photo/{photo_id}	Preview Photo Identity of User
PUT	{Base_URI}/customer/{organization_id}/users/{user_id}/photo/{photo_id}/status	Update status of Uploaded Photo Identity
DELETE	{Base_URI}/customer/{organization_id}/users/{user_id}/photo/{photo_id}	Delete Photo Identity of User

2.5 Schema definitions

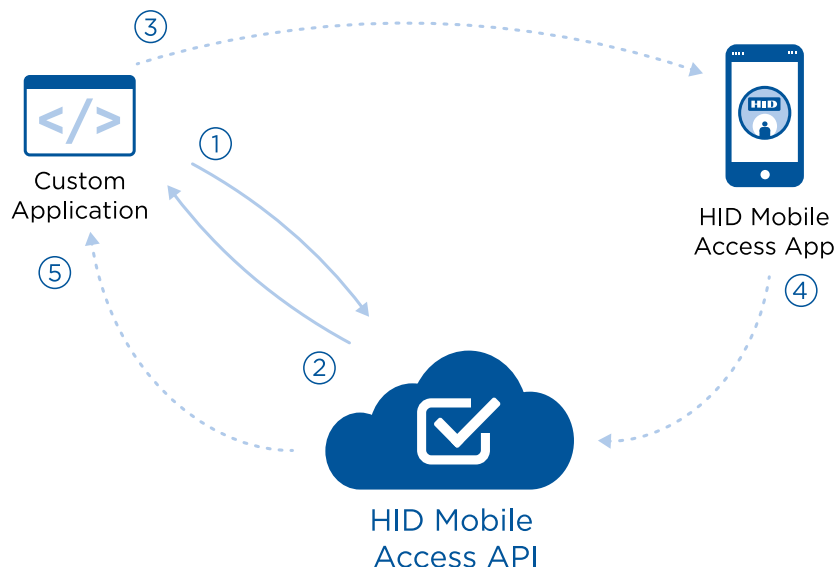
This section details the expected schema definitions.

2.5.1 urn:hid:scim:api:ma:2.2:UserInvitation

Usually attached to User/Get Invitation, the Invitation details associated to the user.

Attribute Name	Request URI	Description
id	Number	The internal ID (Unique) to lookup the invitation
invitationCode	String	Actual Invitation code with length 16 code is represented in blocks of four separated by a "-". Each block contains four alphanumeric characters.
createdDate	String in (UTC format)	Date and Time on which the Invitation is created
expirationDate	String in (UTC format)	Invitation code expiration Date and Time
status	String	Represents the current status of an Invitation Code. List of available status: PENDING - Invitation Active FAILED - Invitation Failed ACKNOWLEDGED - Invitation Code Redeemed EXIRED - Invitation Expired CANCELLED - Invitation Cancelled NOT_SUPPORTED - Device Not Supported CANCEL_FAILED - Cancel Failed

Invitation Lifecycle



Step	Action	Description
1	Create Invitation Code	Initiation of Invitation Code creation
2	Return Invitation Code	Invitation Code status: PENDING
3	Distribute Invitation Code	This can happen using any channel. Out of the box, email distribution is supported.
4	Acknowledge Invitation Code	Invitation Code is consumed by HID Mobile Access SDK. Depending on result, Invitation Code status changes to: ACKNOWLEDGED NOT_SUPPORTED FAILED
5	Invitation Code status changes via Callback Notification	If the consuming application has subscribed to callback notifications, Invitation Code status updates will be provided as part of Notification callbacks.

Example:

Below is a sample response of User Invitation schema details of a specific user:

```

"urn:hid:scim:api:ma:2.2:UserInvitation": [
  {
    "id": "1313",
    "invitationCode": "EWEL-R42A-I64Y-FW2Z",
    "status": "PENDING",
    "createdDate": "2016-03-05T12:52:25Z",
    "expirationDate": "2016-03-05T13:02:25Z"
  }
]

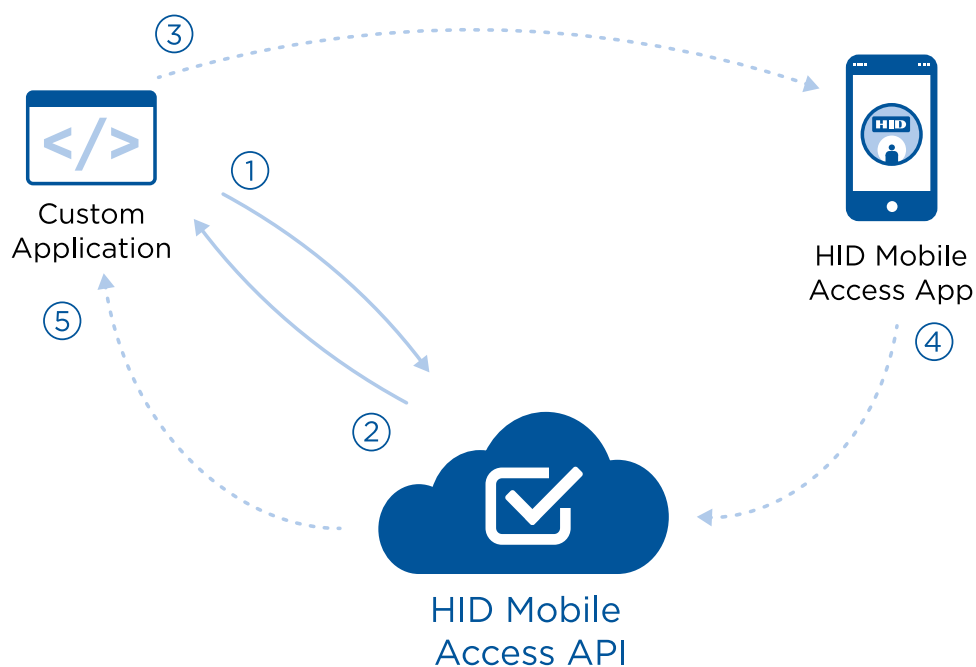
```

2.5.2 urn:hid:scim:api:ma:2.2:CredentialContainer

Credential Container is the standard naming convention used for the Mobile Devices holding the issued Credentials. Usually attached to User/Get CredentialContainer, the credential container details are bound to the user.

Attribute Name	Request URI	Description
id	Number	The internal ID (Unique) to lookup the device
osVersion	String	Registered Device Operating system version
status	String	Represents the current status of an Invitation Code. List of available status: EMULATED - Applet resides on the Mobile App
manufacturer	String	Registered Device Manufacturer
model	String	Registered Device Model
applicationVersion	String	HID Mobile Access application version running on the device
simOperator	String	Device Subscriber Identity Module provider
bluetoothCapability	String	Device is capable of bluetooth [Y/N]
nfcCapability	String	Device is capable of NFC [Y/N]
status	String	Represents the current status of an Invitation Code. List of available status: PENDING - Invitation Active ACTIVE - Ready for Mobile ID REGISTERED - Registered NOT_ELIGIBLE - Device Not Supported TERMINATED - Terminated INACTIVE - Inactive DELETE_INITIATED - Delete Initiated DELETE_FAILED - Delete Device Failed

Endpoint Lifecycle



Step	Action	Description
1	Create Invitation Code	Initiation of Invitation Code creation
2	Return Invitation Code	Invitation Code status: PENDING
3	Distribute Invitation Code	This can happen using any channel. Out of the box, email distribution is supported.
4	Acknowledge Invitation Code	Invitation Code is consumed by HID Mobile Access SDK. Depending on result, Invitation Code status changes to: ACKNOWLEDGED NOT_SUPPORTED FAILED
5	Endpoint state changes	Invitation Code is consumed by HID Mobile Access App. The endpoint state changes to: INSTALLING INSTALLED PERSONALIZING PERSONALIZED
6	Endpoint status changes via Callback Notification	If the consuming application has subscribed to callback notifications, Endpoint status updates will be provided as part of Notification callbacks as: ACTIVE TERMINATED SUSPENDED

Example:

Below is a sample response of CredentialContainer schema details:

```
"urn:hid:scim:api:ma:2.2:CredentialContainer": [  
  {  
    "id": "120283",  
    "status": "ACTIVE",  
    "osVersion": "Android 5.1",  
    "secureElementType": "EMULATED",  
    "manufacturer": "LGE",  
    "model": "Nexus 4",  
    "applicationVersion": "2.5-hid",  
    "simOperator": "AT&T",  
    "bluetoothCapability": "Y",  
    "nfcCapability": "Y"  
  }  
]
```

2.5.3 urn:hid:scim:api:ma:2.2:Credential

Usually attached to User/Get Device/Get Credential. The Credentials associated to user's Credential Container.

Attribute Name	Data Type	Description
id	Number	The internal ID (Unique) to lookup the credential details
partNumber	String	Credential part number
partnumberFriendlyName	String	Friendly Name associated to Credential's part number
cardNumber	String	Credential card number
cardData	String	Card Data against which credentials will be generated and issued
CredentialType	String	Category of Credential, for example: ICLASSEOS
status	String	Represents the current status of Credential List of available status: UNBOUNDED - Ready for Mobile ID (Unbound) ISSUE_INITIATED - Mobile ID Issue Initiated ISSUING - Mobile ID Issuing ISSUING_FAILURE - Mobile ID Delivery Failed ISSUED - Mobile ID Delivered REVOKE_INITIATED - Mobile ID Revoke Initiated REVOKING - Mobile ID Revoking REVOKING_FAILURE - Mobile ID Revoke Failed REVOKED - Mobile ID Revoked

Example1:

Below is a sample response of Seos® Credential schema details:

```
"urn:hid:scim:api:ma:2.2:Credential": [
  {
    "id": "1045712",
    "partNumber": "MOBILE_ID",
    "partnumberFriendlyName": "HID Global",
    "cardNumber": "143",
    "status": "ISSUED",
    "CredentialType": "ICLASSEOS"
  }
]
```

Example2:

Below is a sample response of Custom SIO Credential schema details:

```
"urn:hid:scim:api:ma:2.2:Credential": [
  {
    "id": "1045712",
    "partNumber": "MOBILE_ID",
    "partnumberFriendlyName": "HID Global",
    "cardData": "Welcome to ASSA ABLOY Mobile Access",
    "status": "ISSUED",
    "CredentialType": "ICLASSEOS"
  }
]
```

2.5.4 urn:hid:scim:api:ma:2.2:UserAction

Usually attached to User/Create Invitation/Issue Credential, the list of commands/actions performed using the services.

Attribute Name	Data Type	Description
createInvitationCode	String	User needs an Invitation code generated along with the enrollment process. Attribute Value should be either Y/y or N/n.
sendInvitationEmail	String	Send an email once the Invitation code is generated successfully. Attribute Value should be either Y/y or N/n.
assignCredential	String	Assign next available credential once the user consumes Invitation Code. This action is applicable if and only if the create Invitation Code is requested in the same request. Attribute Value should be either Y/y or N/n.
cardData	String	Card Data against which credentials will be generated and issued.
partNumber	String	Part number that needs to be assigned.
credential	Number	Unique Credential that needs to be assigned to a Credential Container.

Example 1:

Below is a sample request body containing UserAction schema for a normal user:

```
"urn:hid:scim:api:ma:2.2:UserAction": {
  "createInvitationCode": "Y",
  "sendInvitationEmail": "N",
  "assignCredential": "Y",
  "partNumber": "MOBILE-ID"
```

Example 2:

Below is a sample request body containing UserAction schema for a Custom SIO user:

```
"urn:hid:scim:api:ma:2.2:UserAction": {
  "createInvitationCode": "Y",
  "sendInvitationEmail": "N",
  "assignCredential": "Y",
  "cardData": "Welcome to ASSA ABLOY Mobile Access",
  "partNumber": "MOBILE-ID"
```

Note:

- The parameters below become applicable only when "createInvitationCode" is set to "Y"
 - "sendInvitationEmail"
 - "assignCredential"
- For the parameter "partNumber", if not specified, it will pick the default PartNumber set in the portal.
- For the parameter "credential", if not specified, it will assign the next available credential in the sequence.
- For the parameter "cardData", if not specified, normal SEOS TSM credential will be generated.

2.5.5 urn:hid:scim:api:ma:2.2:Part Number

Attribute Name	Data Type	Description
id	String	Internal unique ID of Part Number
partNumber	String	Credential Part Number (HID Defined Part Number)
friendlyName	String	Friendly Name of Part Number
description	String	Description of Part Number
availableQty	Number	Total available Credentials that are not bounded yet

Example:

```
{
  "schemas": ["urn:hid:scim:api:ma:2.2:PartNumber"],
  "urn:hid:scim:api:ma:2.2:PartNumber": [ {
    "meta": {
      "resourceType": "PartNumber",
      "lastModified": "2016-04-18T16:52:34Z",
      "location": "{Base_URI}/customer/548/part-number/134062_1121",
      "partNumber": "MOBILE-ID",
      "credential": "995234"
    },
    "id": 134062_1121,
    "partNumber": "MOBILE-ID_FTPN_1121",
    "friendlyName": "SDK",
    "description": "Texas_PN",
    "availableQty": 155,
    "badgeType": "FTPN",
    "programmingData": {
      "format_number": "H10301",
      "facility code": "101",
      "incremental_card id number": "0"
    }
  },
  {
    "offset": 0,
    "prefix": "",
    "suffix": "",
    "nextNumber": 45,
    "lastNumber": 100,
    "replenishmentState": "In Progress"
  }
  ]
}
```

2.5.6 urn:hid:scim:api:ma:2.2:CallbackRegistration

End User Organizations should adhere to this schema for callback registration.

Callback Attribute Name	Description
callbackUrl	URL is provided by API Integrator to subscribe for status updates

Example:

```
{
  "schemas": ["urn:hid:scim:api:ma:2.2:CallbackRegistration"],
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUrl": "https://username:password@example.com/"
  }
}
```

2.5.7 urn:hid:scim:api:ma:2.2:Notification

Notification Attribute Name	Description
pacUsers	Details of Users with status updates (if any)
invitations	Details of Invitations with status updates (if any)
credentialContainers	Details of Credential Containers with status updates (if any)
credentials	Details of Credentials with status updates (if any)

Example:

```
{
  "schemas": ["urn:hid:scim:api:ma:2.2:Notification"],
  "pacUsers": [ {
    "id": "15873",
    "status": "INACTIVE",
    "timestamp": "2016-03-07T12:47:43Z"
  }
],
  "invitations": [ {
    "id": "2958458",
    "status": "ACKNOWLEDGED",
    "timestamp": "2016-03-07T12:47:43Z"
  }
],
  "credentialContainers": [ {
    "id": "2679004",
    "status": "ACTIVE",
    "timestamp": "2016-03-07T12:47:43Z"
  }
],
  "credentials": [ {
    "id": "3195458",
    "status": "ISSUED",
    "timestamp": "2016-03-07T12:47:43Z"
  }
]
}
```

Subscription State and Period State change notifications for Subscription customers will have the following attributes.

Callback Attribute Name	Description
licenseInfo	Details of Subscription with Period/Subscription state updates

Example:

Subscription state change notification:

```
{
  "schemas": ["urn:hid:scim:api:ma:2.2:Notification"],
  "licenseInfo": [ {
    "licenseState": "Good Standing",
    "timestamp": "2016-03-07T12:47:43Z"
  } ]
}
```

Period state change notification:

```
{
  "schemas": ["urn:hid:scim:api:ma:2.2:Notification"],
  "licenseInfo": [ {
    "periodState": "Normal",
    "timestamp": "2016-03-07T12:47:43Z"
  } ]
}
```

2.5.8 urn:hid:scim:api:ma:2.2:LicenseInfo

When an organization requests for its license details, the response will adhere to this schema. Usually attached to an end user organization and also to each User associated with that organization.

License information for an Organization:

Attribute Name	Description
partNumber	Subscription Part number (HID Defined part number)
name	Subscription Name that the Organization has bought/opted in for during onboarding. List of available options: STANDARD
availableQty	Details of Credential Containers with status updates (if any)
consumedQty	Details of Credentials with status updates (if any)
startDate	Date and Time from which Subscription period starts (N/A at user level)
endDate	Date and Time from which Subscription period expires (N/A at user level)
licenseState	Represents the current Subscription status of an organization. (N/A at user level). List of available options: Good Standing Nearing Limit Full Usage Over Usage Over Tolerance Excessive Duration A Excessive Duration B
periodState	Represents the current Subscription time period status of an organization. (N/A at user level). List of available options: Pending Start Normal Reminder A Reminder B Pending Limitation Pending Suspension Pending Termination Limitation Suspension Termination
statusMessage	Provides an indication of the current subscription status of an organization. (N/A at user level).

Example:

```
{ "urn:hid:scim:api:ma:2.2:LicenseInfo": [
  {
    "partNumber": "MOBILE-ID-SUB-T100",
    "name": "Standard",
    "availableQty": 0,
    "consumedQty": 1,
    "startDate": "2017-09-12T00:00:00Z",
    "endDate": "2017-11-07T00:00:00Z",
    "licenseState": "Full Usage",
    "periodState": "Reminder A",
    "statusMessage": "Action Needed"
  }
]
```

License information for a user:

Attribute Name	Description
partNumber	Details of Subscription with Period/Subscription state updates
name	Subscription Name that the Organization has bought/opted in for during onboarding. List of available options: STANDARD
consumedQty	Details of Credentials with status updates (if any).

Example:

```
{ "urn:hid:scim:api:ma:2.2:LicenseInfo": [
  {
    "partNumber": "MOBILE-ID-SUB-T100",
    "name": "Standard",
    "consumedQty": 5,
  }
]
```

2.5.9 urn:hid:scim:api:ma:2.2:SDKVersion

When End User Organizations queries for MA API Version, the response will adhere to this schema.

Callback Attribute Name	Description
version	Version of MA API Callback

Example:

```
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "version": "2.2"
  }
}
```

2.5.10 urn:ietf:params:scim:api:2.0:ListResponse

Search Attribute Name	Description
totalResults	Total number of results
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
resources	Location of the resource to get more details of Credentials
attributes	List of attributes that needs to be returned in response after searching and is optional

2.5.11 urn:ietf:params:scim:schemas:core:2.0:User

Attribute Name	Data Type	Description
Schemas	Schema[]	Mandatory schemas supported
externalId	String	This attribute will be used to uniquely identify the enrolled user between user and HID systems. This is an optional field and works as per the settings in the portal.
Status	String	Status of the User. It could be: "ACTIVE", "INACTIVE_INITIATED"
Id	Number	Required. This identifier is provided by HID Global and MUST be unique across the Service Provider's entire set of Resources.
name (givenName + familyName)	Name[]	Name of the user to be enrolled.
emails (value)	String	Email address of the user to be enrolled
meta.resourceType	Meta	PACUser
meta.lastModified	Meta	Modified date time in UTC
meta.location	Meta	URI location to GET user details
urn:hid:scim:api:ma:2.2:LicenseInfo	LicenseInfo[]	Subscriptions associated with the User (Applicable only when the user's organization is in Subscription mode).
cardData	String	Card Data against which credentials will be generated and issued.

Example:

```

{
  "schemas": ["urn:ietf:params:scim:schemas:core:2.0:User"],
  "id": 786386
  "externalId": "A_001",
  "name": {
    "familyName": "James",
    "givenName": "Patrick"
  },
  "emails": [{"value": "jamespatrick@grr.la"}],
  "status": "ACTIVE"
}

```

2.5.12 urn:hid:scim:api:ma:2.2:User:Photo

When a User uploads a photo identity, the response will adhere to this schema.

Attribute Name	Data Type	Description
location	String	API URL for retrieving the photo id with proper authorization header
type	String	Type of the photo identity, currently defaulted to "photo"
status	String	Status of the Photo Identity uploaded: PERSONALIZING PERSONALIZED REJECTED

Example:

```
"urn:hid:scim:api:ma:2.2:User:Photo": [
  {
    "location": "{Base_URL}/credential-management/customer/2264/users/10440496/photo/37005",
    "type": "photo",
    "status": "PERSONALIZED"
  }
]
```

2.6 Search schema definitions

This section provides definitions for details Search schema.

2.6.1 urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Users

Search for users based on the following attributes. All the provided attributes are optional. Attribute names should be in standard attribute notation.

Search Attribute Name	Data Type	Description
name.familyName	String	User Family Name
name.givenName	String	User Given Name
emails.value/emails	String	User Email Address

Search Filter Name	Data Type	Description
name.familyName	String	User Family Name
name.givenName	String	User Given Name
emails	String	User Email Address
externalId	String	User external ID
meta.lastModified	String (UTC date time format)	Last Modified Date Time of User
status	String	User status List of available status: ACTIVE - Active Mobile End User INACTIVE_INITIATED - Deleting User

Note: Filter attribute values (which are alpha numeric) should always be given in quotes.

Example:

```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "name.familyName",
    "name.givenName",
    "emails"
  ],
  "filter": "emails.value eq \"TestUser@hidglobal.com\"",
  "sortBy": "name.familyName",
  "sortingOrder": "descending",
  "startIndex": 1,
  "count": 100
}
```

2.6.2 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display User Search Result Set

Search for a list of users based on the following attributes.

Attribute Name	Description
totalResults	Total number of user
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
Resources	Location of the resource to get more details of users
attributes	Optional. List of attributes to be returned after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [ {
    "meta": {
      "resourceType": "PACUser",
      "lastModified": "2016-03-20T09:38:41Z",
      "location": "{Base_URI}/customer/548/users/75523"
    },
    "name": {
      "familyName": "Jack",
      "givenName": "Sparrow"
    },
    "emails": [{"value": "TestUser@hidglobal.com"}]
  }
]
```

2.6.3 urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Invitations

Search for Invitations based on the following attributes. All the provided attributes are optional. Attribute names should be in standard attribute notation.

Attribute Name	Data Type	Description
id	Number	Invitation unique ID
invitationCode	String	16 Digit Alpha-numeric Invitation Code
status	String	Status of an Invitation Code

Filter Name	Data Type	Description
id	String	Invitation unique ID
invitationCode	String	16 Digit Alpha-numeric Invitation Code
meta.lastModified	String (UTC date time format)	Last Modified Date Time of Invitation
status	String	Status of an Invitation Code. For Status details, refer to: urn:hid:scim:api:ma:2.2:UserInvitation

Example:

```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "id",
    "invitationCode",
    "status",
    "status": "ISSUED",
    "CredentialType": "ICLASSEOS"
  ],
  "filter": "status eq \"PENDING\"",
  "sortBy": "id",
  "sortingOrder": "ascending",
  "startIndex": 1,
  "count": 25
}
```

2.6.4 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Invitation Search Result Set

When the user performs an action to get a list of Invitations.

Search Attribute Name	Description
totalResults	Total number of Invitations
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
Resources	Location of the resource to get more details of invitation
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "UserInvitation",
        "lastModified": "2017-08-18T06:59:04Z",
        "location": "{Base_URI}/customer/701694/invitation/26220438"
      },
      "id": 26220438,
      "invitationCode": "LAUK-YW3H-UTQN-56ND",
      "status": "PENDING"
    }
  ]
}
```

2.6.5 urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Part Numbers

Search for Part Numbers based on the following attributes. All the provided attributes are optional. Attribute names should be in standard attribute notation.

Attribute Name	Data Type	Description
id	String	Part Number unique ID
partNumber	String	HID Defined Part Number
friendlyName	String	Friendly Name of the Part Number
description	String	Description of Part Number
availableQty	Number	Total available Credentials that are not bounded yet

Filter Name	Data Type	Description
partNumber	String	Credential Part Number
friendlyName	String	Friendly Name of Part Number
meta.lastModified	String (UTC date time format)	Last Modified Date Time of Part Number

Example:

```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "partNumber",
    "availableQty"
  ],
  "filter": "partNumber eq \"MOBILE-ID-SUB-CRD\"",
  "sortBy": "availableQty",
  "sortingOrder": "descending",
  "startIndex": 1,
  "count": 10
}
```

2.6.6 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Part Number Search Result Set

When the user performs an action to get a list of Part Numbers.

Search Attribute Name	Description
totalResults	Total number of Invitations
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
Resources	Location of the resource to get more details of invitation
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [ {
    "meta": {
      "resourceType": "PartNumber",
      "lastModified": "2016-03-18T16:52:34Z",
      "location": "{Base_URI}/customer/548/part-number/134061"
    },
    "partNumber": "MOBILE-ID-SUB-CRD",
    "availableQty": 155
  } ]
}
```

2.6.7 urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Credential

Search for a Credential based on the following attributes. All the provided attributes are optional. Attribute names should be in standard attribute notation.

Search Attribute Name	Data Type	Description
id	Number	The internal ID (Unique) to lookup the mobile ID which is of type INTEGER
partNumber	String	Credential part number
cardNumber	String	Credential Number
referenceNumber	String	Credential reference number
status	Number	Credential status

Search Filter Name	Data Type	Description
cardNumber	String	Credential Number
referenceNumber	String	Credential reference number
meta.lastModified	String (UTC date time format)	Last Modified Date Time of Credential
status	String	Credential status. For Status Details, refer to: urn:hid:scim:api:ma:2.2:Credential

Example:

```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "partNumber",
    "availableQty"
  ],
  "filter": "partNumber eq \"UNBOUND\"",
  "sortBy": "status",
  "sortingOrder": "descending",
  "startIndex": 1,
  "count": 10
}
```

2.6.8 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Credential Search Result Set

When the user performs an action to search for a list of Credentials.

Search Attribute Name	Description
totalResults	Total number of Credentials associated to the part number or the device
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
Resources	Location of the resource to get more details of Credentials
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "UserCredential",
        "lastModified": "2016-03-20T09:32:03Z",
        "location": "{Base_URI}/customer/548/credential/926632"
      },
      "id": 10696845,
      "partNumber": "MID-SUB-CRD_FTPN_600041",
      "cardNumber": 30,
      "status": "ISSUED"
    }
  ]
}
```

2.6.9 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display User Result Set

When the user performs an action to get a list of Users.

Search Attribute Name	Description
totalResults	Total number of Users associated to a particular organization
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
resources	Location of the resource to get more details of Credentials
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "PACSTUser",
        "lastModified": "2016-03-01T21:32:44Z",
        "location": "{Base_URI}/customer/548/users/900001"
      }
    }
  ]
}
```

2.6.10 urn:ietf:params:scim:api:messages:2.0:ListResponse - Display Invitation Result Set

When the user performs an action to get a list of Invitations.

Search Attribute Name	Description
totalResults	Total number of results
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
resources	Location of the resource to get more details of Credentials
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "UserInvitation",
        "lastModified": "2016-03-01T21:32:44Z",
        "location": "{Base_URI}/customer/548/invitation/458903"
      }
    }
  ]
}
```

2.6.11 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Credential Container Result Set

When the user performs an action to to get a list of Credential Containers.

Search Attribute Name	Description
totalResults	Total number of results
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
resources	Location of the resource to get more details of Credentials
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "UserCredentialContainer",
        "lastModified": "2016-03-01T21:32:44Z",
        "location": "{Base_URI}/customer/548/credential-container/12345"
      }
    }
  ]
}
```

2.6.12 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Part Number Result Set

When the user performs an action to get a list of Part Numbers.

Search Attribute Name	Description
totalResults	Total number of results
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
resources	Location of the resource to get more details of Credentials
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "PartNumber",
        "lastModified": "2016-03-01T21:32:44Z",
        "location": "{Base_URI}/customer/548/part-number/45"
      }
    }
  ]
}
```

2.6.13 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Credential Result Set

When the user performs an action to get a list of Credentials.

Search Attribute Name	Description
totalResults	Total number of Credentials
itemsPerPage	Number of Resources displayed per page
startIndex	Start Index Number
resources	Location of the resource to get more details of Credentials
attributes	Optional. List of attributes that needs to be returned in response after searching

Example:

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "UserCredential",
        "lastModified": "2016-03-01T21:32:44Z",
        "location": "{Base_URI}/customer/548/credential/50001"
      }
    }
  ]
}
```

Section 03

Common functionality

3.1 Search and list functions

This section details the default values to be selected (if not provided).

3.1.1 Pagination

By default, the system will always show 25 resources at a time.

Attribute Name	Data Type	Description
startIndex	Number	Mandatory Field. The 1-based index of the 1 first query result. A value less than 1 will be interpreted as 1. If not specified, default to 1.
count	Number	Mandatory Field. Specifies the desired maximum number of query results per page. A negative value will be interpreted as "0". A value of "0" indicates no resource results are to be returned except for totalResults. If not specified, default to 0. If count>25, default 25 resources will be returned. Any decimal value will be truncated to whole number.

3.1.2 Sorting

By default, the system will always sort by last modified date in descending order.

Attribute Name	Data Type	Description
sortBy	String	If specified, used to order the return responses based on attributes value, Otherwise, default attribute lastModified will be taken.
sortOrder	String	If specified, the order in which sortBy parameter is applied. Allowed values are "ascending" or "descending" [case-insensitive]. If not specified, default value will be "descending".

3.1.3 Attributes

Attributes are optional. The system will return only Meta with location of the resource if any of the attributes if are not specified.

Meta Attributes	Data Type	Description
meta.resourcetype	String	Resource type.
meta.lastModified	Meta	Last modified date time in UTC.
meta.location	Meta	URI location of the resource details.

3.2 Search entity

3.2.1 Description

Search functionality is common to all entities and follows the same pattern. Request and response format is always the same, just the endpoints and resource types change.

```
[POST] /<entity>/search
Content-Type:
application/vnd.assaabloy.ma.credential-management-2.2+json
Schema Extensions:
"urn:ietf:params:scim:api:messages:2.0:SearchRequest"
"urn:ietf:params:scim:api:messages:2.0:ListResponse"
```

3.2.2 Common search operators

The following operators are supported commonly for Search operations.

Supported Operators:

SCIM Filter Operators	Description
eg	equal
ne	not equal
gt	greater than
ge	greater than or equal to
lt	less than
le	less than or equal to
co	contains
sw	starts with
ew	ends with
pr	presence
AND	logical and
OR	logical or
()	precedence grouping

Supported Operators:

SCIM Filter Operators	Description
NOT	logical not
[]	complex attribute filter grouping operator

Note: Filter values for all attributes and operators are case-sensitive during search operations.

3.3 Callback notifications

Service Consumers will use the Mobile Access API to execute Mobile Access operations such as enroll users, create invitations, register devices, and issue/revoke credentials. Some of the operations have a lead time.

In order to avoid Service Consumers from repeatedly querying the status of such long lead time operations, the Service Provider can provide callback functionality which will send notifications whenever there is a change in status of these operations.

To receive these callback notifications the Service Consumer will need to register a URL with the Service Provider (see the [Callbacks](#) section). This URL must be capable of receiving and processing notifications. The callback URL must use HTTPS. Authentication is optional, however only URL Based BASIC Authentication is supported.

Once the callback notifications are pushed to the Service Consumer using the registered URL, the Service Provider will delete the notification after the Service Consumer acknowledges the notification (i.e. HTTP Response code as 200). For information, see the [Callbacks](#) section.

If the Service Provider is not able to reach the Service Consumer (i.e. other than response code 200), then the Service Provider will retry to push notifications for up to five times every three minutes. If the notification to Service Consumer is exhausted with five retries, then the notifications will be marked for expiration.

These callback notifications adhere to the schema defined in [urn:hid:scim:api:ma:2.2:Notification](#). A sample callback notification payload is shown in the following section.

For subscription customers, callbacks will be sent when there are changes in their Subscription State and Period state.

3.4 Sample Callback Notification Payload

Sample Request URI

[POST] {Registered Callback URI}

Sample Callback Notification Payload - with URL based BASIC Authentication

```
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
{
  "schemas" : ["urn:hid:scim:api:ma:2.2:Notification"],
  "pacsUsers" : [{
    "id" : "15873",
    "status" : "INACTIVE",
    "timestamp" : "2016-03-07T12:47:43Z"
  }],
  "invitations" : [],
  "credentialContainers" : [],
  "credentials" : [],
}
```

Sample Callback Notification Payload - without URL based BASIC Authentication

```
{
  "schemas" : ["urn:hid:scim:api:ma:2.2:Notification"],
  "pacsUsers" : [{
    "id" : "15873",
    "status" : "INACTIVE",
    "timestamp" : "2016-03-07T12:47:43Z"
  }],
  "invitations" : [{
    "id" : "2058458",
    "status" : "ACKNOWLEDGED",
    "timestamp" : "2016-03-07T12:47:43Z"
  }],
  "credentialContainers" : [{
    "id" : "2679004",
    "status" : "ACTIVE",
    "timestamp" : "2016-03-07T12:47:43Z"
  }],
  "credentials" : [{
    "id" : "3195458",
    "status" : "ISSUED",
    "timestamp" : "2016-03-07T12:47:43Z"
  }],
}
```

Sample Client/Consumer Response Payload

```
HTTP/1.1 200 OK
```

Section 04

Users

4.1 Create User

Description

[POST] {[Base_URI](#)}/customer/{organization_id}/users

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Schema Extensions: urn:hid:scim:api:ma:2.2:UserAction

Request JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported
externalId	String	This attribute will be used to uniquely identify the enrolled user between user and HID systems. This is an optional field and works as per the settings in the portal.
name (givenName + familyName)	Name[]	Required. Name of the user to be enrolled
honorificPrefix	String	Optional. Title of the user
honorificSuffix	String	Optional. Suffix of the user
emails (value)	String	Required. Email address of the user to be enrolled
Phone no (value)	String	Optional Phone
Phone no (type)	String	Type of Phone number (Work)
urn:hid:scim:api:ma:2.2:UserAction	Action[]	Refer to, urn:hid:scim:api:ma:2.2:UserAction
cardData	String	Card Data against which credentials will be generated and used
meta.resourcetype	String	Optional. PACSUser

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported
id	Number	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources
status	String	Status of the user
User Schema Details		Refer to, urn:ietf:params:scim:schemas:core:2.0:User
meta.resourcetype	String	PACSUser
meta.lastModified	Meta	Modified data time in UTC
meta.location	Meta	URI location to GET user details

Sample Request URI

[POST] {[Base_URI](#)}/customer/{organization_id}/users

Sample Request Payload - Normal User

ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyKlGbsTD

```
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserAction",
    "urn:ietf:params:scim:schemas:core:2.0:User"
  ],
  "externalId": "A101",
  "name": {
    "familyName": "Barbara",
    "givenName": "Jensen",
    "honorificPrefix": "CEO",
    "honorificSuffix": "MS"
  },
  "emails": [
    {
      "value": "Jensen@example.com"
    }
  ],
  "phoneNumbers": [
    {
      "value": "123-456-789"
      "type": "work"
    }
  ],
  "urn:hid:scim:api:ma:2.2:UserAction": {
    "createInvitationCode": "Y",
    "sendInvitationEmail": "N",
    "assignCredential": "Y",
    "partNumber": "",
    "credential": ""
  },
  "meta": {
    "resourceType": "PACSUser"
  }
}
```

Sample Response Payload - Normal User

```
HTTP/1.1 201 Created
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/users/{user_id}
{
  "meta": {
    "resourceType": "PACSTUser",
    "lastModified": "2016-03-20T12:15:29Z",
    "location": "{Base_URI}/customer/{organization_id}/users/90001"
  },
  "schemas": [
    "urn:ietf:params:scim:schemas:core:2.0:User",
    "urn:hid:scim:api:ma:2.2:UserInvitation",
    "urn:hid:scim:api:ma:2.2:Credential"
  ],
  "id": 90001,
  "externalId": "A101",
  "name": {
    "familyName": "Barbara",
    "givenName": "Jensen",
    "honorificPrefix": "CEO",
    "honorificSuffix": "MS"
  },
  "emails": [{"value": "Jensen@example.com"}],
  "phoneNumbers": [{"value": "123-456-789"}], [{"type": "work"}],
  "status": "ACTIVE",
  "urn:hid:scim:api:ma:2.2:UserInvitation": [ {
    "invitationCode": "LJS2-NLL4-73IQ-7UZZ",
    "status": "PENDING",
    "createdDate": "2016-03-20T12:15:30Z",
    "expirationDate": "2016-03-22T12:15:30Z",
    "id": 4522985
  } ],
  "urn:hid:scim:api:ma:2.2:Credential": [ {
    "id": 569596,
    "partNumber": "MOBILE-ID",
    "partnumberFriendlyName": "London office - HID",
    "cardNumber": "1001870",
    "status": "ISSUE_INITIATED",
    "credentialType": "ICLASSSEOS"
  } ]
}
```

Sample Request Payload - Custom SIO User

ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyKlGbsTD

```
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserAction",
    "urn:ietf:params:scim:schemas:core:2.0:User"
  ],
  "externalId": "A101",
  "name": {
    "familyName": "Barbara",
    "givenName": "Jensen",
    "honorificPrefix": "CEO",
    "honorificSuffix": "MS"
  },
  "emails": [
    {
      "value": "Jensen@example.com"
    }
  ],
  "urn:hid:scim:api:ma:2.2:UserAction": {
    "createInvitationCode": "Y",
    "sendInvitationEmail": "N",
    "assignCredential": "Y",
    "cardData": "Welcome to ASSA ABLOY Mobile World",
    "partNumber": "<Only Custom SIO Part number is to be provided>",
  },
  "meta": {
    "resourceType": "PACSUser"
  }
}
```

Sample Response Payload - Custom SIO User

```
HTTP/1.1 201 Created
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/users/{user_id}
{
  "meta": {
    "resourceType": "PACSTUser",
    "lastModified": "2016-03-20T12:15:29Z",
    "location": "{Base_URI}/customer/{organization_id}/users/90001"
  },
  "schemas": [
    "urn:ietf:params:scim:schemas:core:2.0:User",
    "urn:hid:scim:api:ma:2.2:UserInvitation",
    "urn:hid:scim:api:ma:2.2:Credential"
  ],
  "id": 90001,
  "externalId": "A101",
  "name": {
    "familyName": "Barbara",
    "givenName": "Jensen",
    "honorificPrefix": "CEO",
    "honorificSuffix": "MS"
  },
  "emails": [{"value": "Jensen@example.com"}],
  "status": "ACTIVE",
  "urn:hid:scim:api:ma:2.2:UserInvitation": [ {
    "invitationCode": "LJS2-NLL4-73IQ-7UZT",
    "status": "PENDING",
    "createdDate": "2016-03-20T12:15:30Z",
    "expirationDate": "2016-03-22T12:15:30Z",
    "id": 4522985
  } ],
  "urn:hid:scim:api:ma:2.2:Credential": [ {
    "id": 569596,
    "partNumber": "MOBILE-ID",
    "partnumberFriendlyName": "London office - HID",
    "cardData": "Welcome to ASSA ABLOY Mobile World",
    "status": "ISSUE_INITIATED",
    "credentialType": "ICLASSSEOS"
  } ]
}
```

4.2 Get User

Description

[GET] {Base_URI}/customer/{organization_id}/users/{user_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
User -> ID	String	This is the actual User ID provided by HID Global

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory)
externalId	String	This attribute will be used to uniquely identify the enrolled user between user and HID systems. This is an optional field and works as per the settings in the portal.
status	String	Status of the User. It could be : "ACTIVE", "INACTIVE_INITIATED".
id	Number	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources (required)
name (givenName + familyName)	Name[]	Name of the user to be enrolled
honorificPrefix	String	Title of the user
honorificSuffix	String	Suffix of the user
name (givenName + familyName)	Meta	URL location to GET Photo ID details
emails (value)	String	Email address of the user to be enrolled
urn:hid:scim:api:ma:2.2:UserInvitation	Invitation[]	Invitation codes associated to the user
urn:hid:scim:api:ma:2.2:CredentialContainer	CredentialContainer[]	CredentialContainer associated to user with MobileIDs on device
urn:hid:scim:api:ma:2.2:Credential	Credential[]	Credential associated to CredentialContainer of the requested user
meta.resourcetype	Meta	PACSTUser
meta.lastModified	Meta	Modified date time in UTC
meta.location	Meta	URI location to GET user details
cardData	String	Card Data against which credentials will be generated and issued
urn:hid:scim:api:ma:2.2:LicenseInfo	LicenseInfo[]	Subscriptions associated with the user. (Applicable only when the user's organization is in Subscription mode)
urn:hid:scim:api:ma:2.2:User:Photo	Photo[]	Photo Id details of the PACS User. (Refer to Meta Endpoint Schema for details)

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/users/{user_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Sample Response Payload - Normal User

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/users/{user_id}
{
  "meta": {
    "resourceType": "PACUser",
    "lastModified": "2016-03-20T12:15:29Z",
    "location": "{Base_URI}/customer/{organization_id}/users/25650"
  },
  "schemas": [
    "urn:ietf:params:scim:schemas:core:2.0:User",
    "urn:hid:scim:api:ma:2.2:UserInvitation",
    "urn:hid:scim:api:ma:2.2:CredentialContainer",
    "urn:hid:scim:api:ma:2.2:Credential",
    "urn:hid:scim:api:ma:2.2:LicenseInfo"
  ],
  "id": 90001,
  "externalId": "A101",
  "name": {
    "familyName": "Barbara",
    "givenName": "Jensen",
    "honorificPrefix": "CEO",
    "honorSuffix": "MS"
  },
  "emails": [{"value": "Jensen@example.com"}],
  "status": "ACTIVE",
  "urn:hid:scim:api:ma:2.2:UserInvitation": [ {
    "invitationCode": "LJS2-NLL4-73IQ-7UZT",
    "status": "ACKNOWLEDGED",
    "createdDate": "2016-03-20T12:15:30Z",
    "expirationDate": "2016-03-22T12:15:30Z",
    "id": 4522985
  } ],
  "urn:hid:scim:api:ma:2.2:CredentialContainer": [
    {
      "id": "500001",
      "status": "ACTIVE",
      "osVersion": "Android 5.1",
      "secureElementType": "EMULATED",
      "manufacturer": "LG",
      "model": "Nexus 4",
      "applicationVersion": "2.5-hid",
      "simOperator": "AT&T",
      "bluetoothCapability": "Y",
      "nfcCapability": "Y",
      "urn:hid:scim:api:ma:2.2:Credential": [
        {
          "id": 569596,
          "partNumber": "MOBILE-ID",
          "partNumberFriendlyName": "London office - HID",
          "cardNumber": "1001870",
          "status": "ISSUED",
          "credentialType": "ICLASSSEOS"
        }
      ]
    }
  ]
}
```

```

"urn:hid:scim:api:ma:2.2:LicenseInfo": [
  {
    "partNumber": "MOBILE-ID-SUB-T100",
    "name": "Standard",
    "consumedQty": 1
  },
],
"urn:hid:scim:api:ma:2.2:User:Photo": [
  {
    "location": "{Base_URI}/customer/548/users/90001/photo/100",
    "type": "photo",
    "status": "PERSONALIZING" | "PERSONALIZED" | "REJECTED"
  }
],
"meta":{
  "resourceType":"PACUser",
  "lastModified": "2016-03-20T15:15:29Z",
  "location":" {Base_URI}/customer/{organization_id}/users/90001"
}
}

```

Sample Response Payload - Custom SIO User

HTTP/1.1 200 OK

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Location: {Base_URI}/customer/{organization_id}/users/{user_id}

```

{
  "meta": {
    "resourceType": "PACUser",
    "lastModified": "2016-03-20T12:15:29Z",
    "location": "{Base_URI}/customer/{organization_id}/users/25650"
  },
  "schemas": [
    "urn:ietf:params:scim:schemas:core:2.0:User",
    "urn:hid:scim:api:ma:2.2:UserInvitation",
    "urn:hid:scim:api:ma:2.2:CredentialContainer",
    "urn:hid:scim:api:ma:2.2:Credential",
    "urn:hid:scim:api:ma:2.2:LicenseInfo"
  ],
  "id": 90001,
  "externalId": "A101",
  "name": {
    "familyName": "Barbara",
    "givenName": "Jensen",
    "honorificPrefix": "CEO",
    "honorSuffix": "MS"
  },
  "emails": [{"value": "Jensen@example.com"}],
  "status": "ACTIVE",
  "urn:hid:scim:api:ma:2.2:UserInvitation": [ {
    "invitationCode": "LJS2-NLL4-73IQ-7UZT",
    "status": "ACKNOWLEDGED",
    "createdDate": "2016-03-20T12:15:30Z",
    "expirationDate": "2016-03-22T12:15:30Z",
    "id": 4522985
  } ],
  "urn:hid:scim:api:ma:2.2:CredentialContainer": [
    {
      "id": "500001",
      "status": "ACTIVE",
      "osVersion": "Android 5.1",
      "secureElementType": "EMULATED",
      "manufacturer": "LG",
      "model": "Nexus 4",
      "applicationVersion": "2.5-hid",
      "simOperator": "AT&T",
      "bluetoothCapability": "Y",
      "nfcCapability": "Y",

```

```
"urn:hid:scim:api:ma:2.2:Credential": [
  {
    "id": 569596,
    "partNumber": "MOBILE-ID",
    "partnumberFriendlyName": "London office - HID",
    "cardData": "Welcome to ASSA ABLOY Mobile Access",
    "status": "ISSUED",
    "credentialType": "ICLASSEOS"
  }
],
"urn:hid:scim:api:ma:2.2:LicenseInfo": [
  {
    "partNumber": "MOBILE-ID-SUB-T100",
    "name": "Standard",
    "consumedQty": 1
  }
],
"meta": {
  "resourceType": "PACSUser",
  "lastModified": "2016-03-20T15:15:29Z",
  "location": " {Base_URI}/customer/{organization_id}/users/90001"
}
}
```

4.3 List Users

Description

[GET] {Base_URI}/customer/{organization_id}/users

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

This Response will adhere to the schema defined in:

- [2.6.9 urn:ietf:params:scim:api:messages:2.0:ListResponse – Display User Result Set](#)

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/users

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/users
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults":150,
  "itemsPerPage":25,
  "startIndex":1,
  "resources":[
    {
      "meta":{
        "resourceType":"PACSTUser",
        "lastModified": "2016-03-20T15:15:29Z",
        "location":" {Base_URI}/customer/{organization_id}/users/90001"
      },
    },
    {
      "meta":{
        "resourceType":"PACSTUser",
        "lastModified": "2016-03-20T14:15:29Z",
        "location":" {Base_URI}/customer/{organization_id}/users/90002"
      }
    },
    ...
    ...
    {
      "meta":{
        "resourceType":"PACSTUser",
        "lastModified": "2016-03-20T10:15:29Z",
        "location":" {Base_URI}/customer/{organization_id}/users/90010"
      }
    }
  ]
}
```

4.4 Search User

Description

[POST] {Base_URI}/customer/{organization_id}/users/.search

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Filtering: If no filter criteria are provided, then all the PACS user records for the respective company will be listed. Logical operators can be used to combine more than one filter conditions.

Sorting: SCIM standards will be followed.

Search PACS Users Request/Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Users](#)
- [urn:ietf:params:scim:api:messages:2.0:ListResponse – Display User Result Set](#)

Sample Request URI

[POST] {Base_URI}/customer/{organization_id}/users/.search

Sample Request Payload

ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD

```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "name.familyName",
    "name.givenName",
    "urn:ietf:params:scim:schemas:core:2.0:User:emails"
  ],
  "filter": "emails.value eq \"Jensen@example.com\"",
  "sortBy": "name.familyName",
  "sortingOrder": "descending",
  "startIndex": 1,
  "count": 100
}
```

Sample Response Payload

HTTP/1.1 200 OK

ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json

Location: {Base_URI}/customer/{organization_id}/users/.search

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [ {
    "meta": {
      "resourceType": "PACUser",
      "lastModified": "2016-03-20T09:38:41Z",
      "location": "{Base_URI}/customer/548/users/900001"
    },
    "name": {
      "familyName": "Barbara",
      "givenName": "Jensen"
    },
    "emails": [{"value": "Jensen@example.com"}]
  } ]
}
```

4.5 Update User

Description

A full update is performed. If optional elements are not passed in the request array then those column values will be replaced with null or default values in the system for the record that is requested for an update. Partial update is not part of this release.

[PUT] {Base_URI}/customer/{organization_id}/users/{user_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
User -> ID	Number	Required. This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources.

Request JSON	Data Type	Min. Width x Height (Pixels)
schemas	Schema[]	Mandatory schemas supported
externalId	String	This is provided by Service Consumer. This attribute will be used to uniquely identify the enrolled user between user and HID systems.
name (givenName + familyName)	Name[]	Required. Name of the user to be enrolled
honorificPrefix	String	Optional. Title of the user
honorificSuffix	String	Optional. Suffix of the user
emails (value)	String	Required. Email address of the user to be enrolled
meta.resourcetype	String	Optional. PACSUser

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported
id	Number	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources
status	String	Status of the user
User Schema Details		Refer to urn:ietf:params:scim:schemas:core:2.0:User
meta.resoucetype	String	PACSUser
meta.lastModified	Meta	Last modified date time in UTC
meta.location	Meta	URI location to GET PACS user details

Sample Request URI

[PUT] {Base_URI}/customer/{organization_id}/users/{user_id}

Sample Response Payload

ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyKlGbsTD

```
{
  "schemas": [
    "urn:ietf:params:scim:schemas:core:2.0:User"
  ],
  "externalId": "A101",
  "name": {
    "familyName": "JensenUpdated",
    "givenName": "BarbaraModified",
    "honorificPrefix": "CEO",
    "honorificSuffix": "MS"
  },
  "emails": [
    {
      "value": "bjensen_patched@example.com"
    }
  ],
  "meta": {
    "resourceType": "PACUser"
  }
}
```

Sample Response Payload

HTTP/1.1 200 OK

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Location: {Base_URI}/customer/{organization_id}/users/90001

```
{
  "schemas": [
    "urn:ietf:params:scim:schemas:core:2.0:User"
  ],
  "id": "90001",
  "externalId": "A101",
  "status": "ACTIVE",
  "name": {
    "familyName": "JensenUpdated",
    "givenName": "BarbaraModified",
    "honorificPrefix": "CEO",
    "honorificSuffix": "MS"
  },
  "emails": [
    {
      "value": "bjensen_patched@example.com"
    }
  ],
  "meta": {
    "resourceType": "PACUser",
    "lastModified": "2016-03-20T15:45:29Z",
    "location": "{Base_URI}/customer/548/users/90001"
  }
}
```

4.6 Delete User

Description

[DELETE] {Base_URI}/customer/{organization_id}/users/{user_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Sample Request URI

[DELETE] {Base_URI}/customer/{organization_id}/users/{user_id}

Sample Request Payload

Not applicable.

Sample Response Payload

HTTP/1.1 204 NO CONTENT

Prevent mass deletions

To prevent unauthorized or malicious deletion of all users in mobile identities or the revoking of all MIDs, on the **Settings** page the organization admin can set a threshold for deleting the number of users per day. Changing the threshold configuration is restricted to once in a 24 hour period.

Sample Error Response Payload

```
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:Error"
  ],
  "scimType": "mutability",
  "detail": "The threshold for maximum number of user deletions permitted has been reached.
    The counter will reset at 24-APR-2019 00:00:00 UTC. Please contact your Organization
    Administrator to update the threshold.",
  "status": "412"
}
```

Section 05

Invitation

5.1 Create Invitation

Description

[POST] {[Base_URI](#)}/customer/{organization_id}/users/{user_id}/invitation

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

An Invitation is always associated with an enrolled Mobile Access user.

Path Parameter	Data Type	Description
User -> ID	Number	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources. Internally this is called as User ID (required).

Request JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported.
urn:hid:scim:api:ma:2.2:UserAction	Action[]	Accepted value is Y/y =>Yes, N/n =>No.
cardData	String	Card Data against which credentials will be generated and used.
meta.resourcetype	String	Optional. User Invitation.

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported.
id	Number	Required. This is unique invitation ID provided by HID Global and must be unique across the system.
invitationCode	String	Actual invitation code which is used to register a Device. This code is entered during device registration process using HID Mobile Access App.
status	String	Status of the invitation.
createdDate	String (UTC date time format)	Creation date in UTC.
expirationDate	String (UTC date time format)	Expiration date in UTC.
urn:hid:scim:api:ma:2.2:Credential	Credential[]	Credential associated to CredentialContainer of the requested User.

Response JSON	Data Type	Description
cardData	String	Card Data against which credentials will be generated and issued.
meta.resourcetype	String	User Invitation.
meta.lastModified	Meta	Last modified date time in UTC.
meta.location	Meta	URI location to GET PACS User Invitation details.

Sample Request URI

[POST] {[Base_URI](#)}/customer/{organization_id}/users/{user_id}/invitation

Sample Request Payload - Normal User

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyKlGbsTD

```
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserAction"
  ],
  "urn:hid:scim:api:ma:2.2:UserAction": {
    "sendInvitationEmail": "N",
    "assignCredential": "Y",
    "partNumber": "",
    "credential": ""
  },
  "meta": {
    "resourceType": "UserInvitation"
  }
}
```

Sample Response Payload - Normal User

HTTP/1.1 201 Created

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Location: {Base_URI}/customer/{organization_id}/invitation/889634

```
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserInvitation",
    "urn:hid:scim:api:ma:2.2:Credential"
  ],
  "urn:hid:scim:api:ma:2.2:UserInvitation": [ {
    "meta": {
      "resourceType": "UserInvitation",
      "lastModified": "2016-03-20T09:31:38Z",
      "location": "{Base_URI}/customer/548/invitation/4521689",
    },
    "invitationCode": "LUAN-PEUT-GYTX-CJAX",
    "status": "PENDING",
    "createdDate": "2016-06-20T09:30:44Z",
    "expirationDate": "2016-06-20T11:30:44Z",
    "id": 4521689
  } ],
  "urn:hid:scim:api:ma:2.2:Credential": [ {
    "id": 926632,
    "partNumber": "MOBILE-ID",
    "partnumberFriendlyName": "London Facility",
    "status": "ISSUE_INITIATED",
    "credentialType": "ICLASSSEOS"
  } ]
}
```

Sample Request Payload - Custom SIO User

```
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyKlGbsTD
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserAction",
  ],
  "urn:hid:scim:api:ma:2.2:UserAction": {
    "sendInvitationEmail": "N",
    "assignCredential": "Y",
    "partNumber": "<Only Custom SIO Part number is to be provided>",
    "cardData": "Welcome to ASSA ABLOY Mobile World",
  },
  "meta": {
    "resourceType": "UserInvitation"
  }
}
```

Sample Response Payload - Custom SIO User

```
HTTP/1.1 201 Created
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/invitation/889634
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserInvitation",
    "urn:hid:scim:api:ma:2.2:Credential"
  ],
  "urn:hid:scim:api:ma:2.2:UserInvitation": [ {
    "meta": {
      "resourceType": "UserInvitation",
      "lastModified": "2016-03-20T09:31:38Z",
      "location": "{Base_URI}/customer/548/invitation/4521689",
    },
    "invitationCode": "LUAN-PEUT-GYTX-CJAX",
    "status": "PENDING",
    "createdDate": "2016-06-20T09:30:44Z",
    "expirationDate": "2016-06-20T11:30:44Z",
    "id": 4521689
  } ],
  "urn:hid:scim:api:ma:2.2:Credential": [ {
    "id": 926632,
    "partNumber": "MOBILE-ID",
    "partnumberFriendlyName": "London Facility",
    "cardData": "Welcome to ASSA ABLOY Mobile World",
    "status": "ISSUE_INITIATED",
    "credentialType": "ICLASSSEOS"
  } ]
}
```

5.2 Get Invitations

Description

[GET] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
Invitation -> ID	Number	This is the actual User ID provided by HID Global.

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory).
id	Number	Required. This is unique invitation ID provided by HID Global and must be unique across the system..
invitationCode	String	Actual invitation code which is used to register a Credential Container. This code is entered during Credential Container registration process using HID Mobile Access App.
status	Name[]	Name of the user to be enrolled.
createdDate	String (UTC date time format)	Creation date in UTC.
expirationDate	String (UTC date time format)	Expiration date in UTC.
meta.resourceType	Meta	User Invitation.
meta.lastModified	Meta	Last modified date time in UTC.
meta.location	Meta	URI location to GET invitation details.

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/invitation/1313
{
  "schemas": ["urn:hid:scim:api:ma:2.2:UserInvitation"],
  "urn:hid:scim:api:ma:2.2:UserInvitation",
  "meta": {
    "resourceType": "UserInvitation",
    "lastModified": "2016-06-20T09:31:38Z",
    "location": "{Base_URI}/customer/548/invitation/4521689"
  },
  "invitationCode": "LUAN-PEUT-GYTX-CJAX",
  "status": "PENDING",
  "createdDate": "2016-03-20T09:30:44Z",
  "expirationDate": "2016-03-20T11:30:44Z",
  "id": 4521689
}
```

5.3 List Invitations

Description

[GET] {Base_URI}/customer/{organization_id}/users/{user_id}/invitation

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
User -> ID	Number	This is unique User ID provided by HID Global and must be unique across the system.

This Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:ListResponse - Display Invitation Result Set](#)

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/users/{user_id}/invitation

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Location: {Base_URI}/customer/{organization_id}/users/90001/invitation
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 2,
  "itemsPerPage": 2,
  "startIndex": 1,
  "resources": [
    {
      "meta": {
        "resourceType": "UserInvitation",
        "lastModified": "2016-03-20T09:31:38Z",
        "location": " {Base_URI}/customer/548/invitation/4521689"
      },
      "meta": {
        "resourceType": "UserInvitation",
        "lastModified": "2016-03-20T09:31:32Z",
        "location": " {Base_URI}/customer/548/invitation/4521676"
      }
    }
  ]
}
```

5.4 Search Invitations

Description

[POST] {[Base_URI](#)}/customer/{organization_id}/users/{user_id}/invitation/.search

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Filtering: If no filter criteria are provided, then all the PACS user records for the respective company will be listed. Logical operators can be used to combine more than one filter conditions.

Sorting: SCIM standards will be followed.

Search PACS Users Request/Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Users](#)
- [urn:ietf:params:scim:api:messages:2.0:ListResponse - Display Invitation Result Set](#)

Sample Request URI

[POST] {[Base_URI](#)}/customer/{organization_id}/users/{user_id}/invitation/.search

Sample Request Payload - Search Invitations

ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD

```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "id",
    "invitationCode",
    "status"
  ],
  "filter": "id eq 4522218",
  "sortBy": "id",
  "sortingOrder": "descending",
  "startIndex": 1,
  "count": 10
}
```

Sample Response Payload - Search Invitations

HTTP/1.1 200 OK

ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD

Location: {[Base_URI](#)}/customer/{organization_id}/users/90001/invitation/.search

```
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [ {
    "meta": {
      "resourceType": "UserInvitation",
      "lastModified": "2016-06-20T09:38:42Z",
      "location": "{Base_URI}/customer/548/invitation/4522218"
    },
    "id": 10696845,
    "partNumber": "MID-SUB_FTPN_600041",
    "cardNumber": 30,
    "status": "ISSUED",
  } ]
}
```

5.5 Cancel Invitation

Description

[DELETE] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Sample Request URI

[DELETE] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}

Sample Request Payload

Not applicable

Sample Response Payload

204 No Content

5.6 Send Invitation

Description

[POST] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}/email

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

An email will be sent to the enrolled PACS user's email address. An email template is accessed from the database and configured in the portal. If no email template is available then the system does not send any email.

Email of Invitation is valid only for the Invitations that are not yet consumed and not yet expired.

Query Parameter	Data Type	Description
Invitation -> ID	Number	Invitation that needs to be communicated via email.

Sample Request URI

[POST] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}/email

Sample Request Payload

Not applicable.

Sample Response Payload

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
HTTP/1.1 200 OK

Section 06

Credential Container

6.1 Get Credential Container

Description

Credential Container ID Specific

[GET] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
CredentialContainer -> ID	Number	Required. This is the Credential Container ID that uniquely identifies the Credential Container.

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported
meta.resourcetype	String	User Credential Container
meta.lastModified	Meta	Modified date time in UTC
meta.location	Meta	URI location to GET Credential Container details
id	Number	The internal ID (Unique) to look up the invitation
osVersion	String	Registered Device Operating system version
secureElementType	String	Type of the secure element (applet) that resides on the phone [SIM/EMULATED]
manufacturer	String	Registered Device Manufacturer
model	String	Registered Device Model
applicationVersion	String	HID Mobile Access application version running on the Device
simOperator	String	Device Subscriber Identity Module provider
bluetoothCapability	String	Device is capable of Bluetooth [Y/N]
nfcCapability	String	Device is capable of NFC [Y/N]
status	String	Represents the current status of Credential Container
cardData	String	Card Data against which credentials will be generated and issued

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}

Sample Request Payload

Not applicable.

Sample Response Payload - Credential Container with SEOS TSM Credential

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/credential-container/4523253
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CredentialContainer",
    "urn:hid:scim:api:ma:2.2:User:Credential"
  ],
  "urn:hid:scim:api:ma:2.2:CredentialContainer": [
    {
      "id": "4523253",
      "status": "ACTIVE",
      "osVersion": "Android 5.1",
      "secureElementType": "EMULATED",
      "manufacturer": "LGE",
      "model": "Nexus 4",
      "applicationVersion": "2.5-hid",
      "simOperator": "AT&T",
      "bluetoothCapability": "Y",
      "nfcCapability": "Y",
      "urn:hid:scim:api:ma:2.2:Credential": [
        {
          "id": "12345",
          "partNumber": "IOD_MB-95024",
          "partnumberFriendlyName": "HID Global",
          "cardNumber": "9876543",
          "status": "ISSUED",
          "credentialType": "ICLASSSEOS"
        }
      ]
    },
    {
      "meta": {
        "resourceType": "UserCredentialContainer",
        "lastModified": "2016-03-20T21:32:44Z",
        "location": "{Base_URI}/customer/548/credential-container/12345"
      }
    }
  ]
}
```

Sample Response Payload - Credential Container with Custom SIO Credential

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/credential-container/4523253
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CredentialContainer",
    "urn:hid:scim:api:ma:2.2:User:Credential"
  ],
  "urn:hid:scim:api:ma:2.2:CredentialContainer": [
    {
      "id": "4523253",
      "status": "ACTIVE",
      "osVersion": "Android 5.1",
      "secureElementType": "EMULATED",
      "manufacturer": "LGE",
      "model": "Nexus 4",
      "applicationVersion": "2.5-hid",
      "simOperator": "AT&T",
      "bluetoothCapability": "Y",
      "nfcCapability": "Y",
      "urn:hid:scim:api:ma:2.2:Credential": [
        {
          "id": "12345",
          "partNumber": "IOD_MB-95024",
          "partnumberFriendlyName": "HID Global",
          "cardNumber": "9876543",
          "cardData": "Welcome to ASSA ABLOY Mobile World",
          "status": "ISSUED",
          "credentialType": "ICLASSEOS"
        }
      ],
      "meta": {
        "resourceType": "UserCredentialContainer",
        "lastModified": "2016-03-20T21:32:44Z",
        "location": "{Base_URI}/customer/548/credential-container/12345"
      }
    }
  ]
}
```

6.2 List Credential Container

Description

[GET] {Base_URI}/customer/{organization_id}/users/{user-id}/credential-container

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Data is sorted based on Credential Container last modified date descending order whenever applicable as default.

Path Parameter	Data Type	Description
User -> ID	Number	This is the User ID that uniquely identifies the user (required).

The Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Credential Container Result Set](#)

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/users/{user-id}/credential-container

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{customer_id}/users/90001/credential-container
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "resources": [
    {
      "meta": {
        "resourceType": "UserCredentialContainer",
        "lastModified": "2016-03-20T13:05:31Z",
        "location": "{Base_URI}/customer/credential-container/4523253"
      }
    }
  ]
}
```

6.3 Delete Credential Container

Description

[DELETE] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Sample Request URI

[DELETE] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}

Sample Request Payload

Not applicable

Sample Response Payload

HTTP/1.1 204 NO CONTENT

Section 07

Credentials/Mobile ID

7.1 Get Credential

Description

Credential Specific

[GET] {Base_URI}/customer/{customer_id}/credential/{credential_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
Credential -> ID	Number	This is the actual Credential ID provided by HID Global

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory)
id	Number	Credential ID
partNumber	String	Part Number
partnumberFriendlyName	String	Part Number Friendly Name.
cardNumber	Number	Credential card number
referenceNumber	Number	Credential reference number
status	String	Status of the Credential
credentialType	String	Credential type
meta.resourcetype	Meta	User Credential
meta.lastModified	Meta	Last modified date time in UTC.
meta.location	Meta	URI location to GET Credential details.
cardData	String	Card Data against which credentials will be generated and issued.

Credential Specific:

[GET] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}/credential

Content-Type:application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
CredentialContainer -> ID	Number	This is the Credential Container id that uniquely identifies the Credential Container - Endpoint ID.

The Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Credential Result Set](#)

Part Number Specific:

[GET] {Base_URI}/customer/{organization_id}/part-number/{part_number_id}/credential

Content-Type:application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
Part Number -> ID	String	This is the actual Part Number

The Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Credential Result Set](#)

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/credential/{credential_id}

[GET] {Base_URI}/customer/{organization_id}/credentialcontainer/{credential_container_id}/credential

[GET] {Base_URI}/customer/{organization_id}/part-number/{part_number_id}/credential

Sample Request Payload

Not applicable.

Sample Response Payload - SEOS TSM Credential Specific

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/credential/569595
{
  "schemas": ["urn:hid:scim:api:ma:2.2:Credential"],
  "urn:hid:scim:api:ma:2.2:Credential": [ {
    "meta": {
      "resourceType": "UserCredential",
      "lastModified": "2016-03-20T09:46:15Z",
      "location": "{Base_URI}/customer/548/credential/5695953"
    },
    "id": 569595,
    "partNumber": "MOBILE-ID",
    "partnumberFriendlyName": "London office - HID",
    "cardNumber": "1001869",
    "status": "ISSUING",
    "credentialType": "ICLASSSEOS"
  } ]
}
```

Sample Response Payload - Custom SIO Credential Specific

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/credential/569595
{
  "schemas": ["urn:hid:scim:api:ma:2.2:Credential"],
  "urn:hid:scim:api:ma:2.2:Credential": [ {
    "meta": {
      "resourceType": "UserCredential",
      "lastModified": "2016-03-20T09:46:15Z",
      "location": "{Base_URI}/customer/548/credential/5695953"
    },
    "id": 569595,
    "partNumber": "MOBILE-ID",
    "partnumberFriendlyName": "London office - HID",
    "cardNumber": "1001869",
    "status": "ISSUING",
    "credentialType": "ICLASSSEOS"
    "cardData": "Welcome to ASSA ABLOY Mobile Access",
  }
]
```

Sample Response Payload - Credential Credential Specific

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/credential-container/90001/credential
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [{"meta": {
    "resourceType": "UserCredential",
    "lastModified": "2016-03-20T09:46:15Z",
    "location": "{Base_URI}/customer/461089/credential/5695951"
  }}]
}
```

Sample Response Payload - Part Number Specific

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/part-number/200/credential
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [{"meta": {
    "resourceType": "UserCredential",
    "lastModified": "2016-03-20T09:46:15Z",
    "location": "{Base_URI}/customer/458/credential/5695952"
  }}]
}
```

7.2 Search Credential

Description

[POST] {[Base_URI](#)}/customer/{customer_id}/part-number/{part_number_id}/credential/.search

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Filtering: If no filter criteria are provided, then all the Credentials for the respective part number will be listed. Logical operators can be used to combine more than one filter condition.

Sorting: SCIM standards will be followed.

Search PACS Users Request/Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Credential](#)
- [urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Credential Search Result Set](#)

Sample Request URI

[POST] {[Base_URI](#)}/customer/{customer_id}/part-number/{part_number_id}/credential/.search

Sample Request Payload - Search Credentials

```
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "partnumber"
  ],
  "filter": "status eq \"UNBOUND\"",
  "sortBy": "status",
  "sortingOrder": "descending",
  "startIndex": 1,
  "count": 10
}
```

Sample Response Payload - Search Credentials

```
HTTP/1.1 200 OK
ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/part-number/534/credential/.search
{
  "schemas":["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 2,
  "itemsPerPage": 2,
  "startIndex": 1,
  "Resources": [
    {
      "meta": {
        "resourceType": "UserCredential",
        "lastModified": "2016-06-20T09:32:03Z",
        "location": "{Base_URI}/customer/548/credential/926632"
      },
      "partNumber": "MOBILE-ID"
    },
    {
      "meta": {
        "resourceType": "UserCredential",
        "lastModified": "2016-06-04T08:51:03Z",
        "location": "{Base_URI}/customer/548/credential/926633"
      },
      "id": "10696845"
      "partNumber": "MID-SUB-CRD_FTPN_600041"
      "cardNumber": 30,
      "status": "ISSUED"
    }
  ]
}
```

7.3 Issue Credential

Description

[POST] {[Base_URI](#)}/customer/{organization_id/credential-container/{credential_container_id}/credential

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
CredentialContainer -> ID	Number	This is the Credential Container ID that uniquely identifies the Credential Container.

Request JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory)
urn:hid:scim:api:ma:2.2:UserAction	Action[]	See urn:hid:scim:api:ma:2.2:UserAction
meta.resourcetype	String	User Invitation (optional).

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory)
id	Number	Credential ID
partNumber	String	Part Number
partnumberFriendlyName	String	Part Number Friendly Name
cardNumber	Number	Credential card number
referenceNumber	Number	Credential reference number
status	String	Status of the invitation
credentialType	String	Mobile ID type
cardData	String	Card Data against which credentials will be generated and issued
meta.resourcetype	String	User Credential
meta.lastModified	Meta	Last modified date time in UTC
meta.location	Meta	URI location to GET Credential details

Sample Request URI

[POST] {[Base_URI](#)}/customer/{organization_id/credential-container/{credential_container_id}/credential

Sample Request Payload - SEOS TSM Credential

```
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserAction"
  ],
  "urn:hid:scim:api:ma:2.2:UserAction": {
    "partNumber": "MOBILE-ID",
    "credential": ""
  },
  "meta": {
    "resourceType": "UserCredential"
  }
}
```

Sample Response Payload - SEOS TSM Credential

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/credential-container/50001/credential
{
  "meta": {
    "resourceType": "UserCredential",
    "lastModified": "2016-03-20T09:46:10Z",
    "location": "{Base_URI}/customer/548/credential/569595",
  },
  "schemas": ["urn:hid:scim:api:ma:2.2:Credential"],
  "id": 569595,
  "partNumber": "MOBILE-ID",
  "partnumberFriendlyName": "London office - HID",
  "cardNumber": "1001869",
  "referenceNumber": "",
  "status": "ISSUE_INITIATED",
  "credentialType": "ICLASSSEOS"
}
```

Sample Request Payload - Custom Credential

```
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:UserAction",
  ],
  "urn:hid:scim:api:ma:2.2:UserAction": {
    "partNumber": "<Only Custom SIO Part number is to be provided>",
    "cardData": "Welcome to ASSA ABLOY Mobile Access",
  },
  "meta": {
    "resourceType": "UserCredential"
  }
}
```

Sample Response Payload - Custom SIO User

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/credential-container/50001/credential
{
  "meta":
    "resourceType": "UserCredential",
    "lastModified": "2016-03-20T09:46:10Z",
    "location": "{Base_URI}/customer/548/credential/569595"
  },
  "schemas": ["urn:hid:scim:api:ma:2.2:Credential"],
  "id": 569595,
  "partNumber": "MOBILE-ID",
  "partnumberFriendlyName": "London office - HID",
  "cardData": "Welcome to ASSA ABLOY Mobile Access",
  "status": "ISSUE_INITIATED",
  "credentialType": "ICLASSSEOS"
}
```

7.4 RevokeCredential

Description

[DELETE] {Base_URI}/customer/{organization_id}/ credential/{credential_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
Credential -> ID	Number	This is the Credential ID that uniquely identifies the credential

Sample Request URI

[DELETE] {Base_URI}/customer/{organization_id}/ credential/{credential_id}

Sample Request Payload

Not applicable.

Sample Response Payload

HTTP/1.1 204 NO CONTENT

Section 08

Part Numbers

8.1 Get Part Numbers

Description

[GET] {Base_URI}/customer/{organization_id}/part-number/{part_number_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
Part Number -> ID	Number	This is the actual Part Number ID (required)

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory)
id	String	Part Number Unique ID
partNumber	String	Part Number
friendlyName	String	Part Number Friendly Name
description	String	Part Number description
availableQty	Number	Number of cards in the Part Number
meta.resourceType	Meta	Part Number
meta.lastModified	Meta	Modified date time in UTC
meta.location	Meta	URI location to GET Part Number details
nextNumber	Number	Next Card Number
lastNumber	Number	Maximum Card Number
Format	String	Format code
Offset	String	Offset
Prefix	String	Prefix
Suffix	String	Suffix
replenishmentState	String	Replenishment State for a subscription Organization. Not applicable for Perpetual Organization.

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/part-number/{part_number_id}

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/part-number/134061
{
  "schemas": ["urn:hid:scim:api:ma:2.2:PartNumber"],
  "urn:hid:scim:api:ma:2.2:PartNumber": [ {
    "meta": {
      "resourceType": "PartNumber",
      "lastModified": "2016-04-18T16:52:34Z",
      "location": "{Base_URI}/customer/548/part-number/134061"
    }
    {
      "id": "4523253",
      "partNumber": "MOBILE-ID",
      "friendlyName": "New York Facility",
      "description": "Desc",
      "availableQty": 155,
      "badgeType": "FTPN",
      "programmingData": {
        "facility code": "99",
        "incremental_card id number": "1",
        "format_number": "TRK-H10301"
      }
    }
  ]
}
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/part-number/134062_1121
{
  "schemas": ["urn:hid:scim:api:ma:2.2:PartNumber"],
  "urn:hid:scim:api:ma:2.2:PartNumber": [ {
    "meta": {
      "resourceType": "PartNumber",
      "lastModified": "2016-04-18T16:52:34Z",
      "location": "{Base_URI}/customer/548/part-number/134062_1121"
    }
    {
      "id": "134062_1121",
      "partNumber": "MOBILE-ID_FTPN_1121",
      "friendlyName": "London Facility",
      "description": "Desc",
      "availableQty": "155",
      "badgeType": "FTPN",
      "programmingData": {
        "format_number": "H10301",
        "facility code": "101",
        "incremental_card id number": "0"
      }
    }
    "offset": 0,
    "prefix": "",
    "suffix": "",
    "nextNumber": 45,
    "lastNumber": 100,
    "replenishmentState": "In Progress"
  ]
}
```

8.2 List Part Numbers

Description

[GET] {Base_URI}/customer/{organization_id}/part-number

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

This Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Part Number Result Set](#)

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/part-number

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/part-number
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 2,
  "itemsPerPage": 2,
  "startIndex": 1,
  "resources": [
    {
      "meta": {
        "resourceType": "PartNumber",
        "lastModified": "2016-04-18T16:52:34Z",
        "location": " {Base_URI}/customer/548/part-number/134061"
      },
      "meta": {
        "resourceType": "PartNumber",
        "lastModified": "2016-04-01T16:53:45Z",
        "location": " {Base_URI}/customer/548/part-number/44"
      }
    }
  ]
}
```

8.3 Search Part Numbers

Description

[POST] {Base_URI}/customer/{organization_id}/part-number/.search

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Filtering: If no filter criteria are provided, then all the part numbers for the respective company will be listed. Logical operators can be used to combine more than one filter condition.

Sorting: SCIM standards will be followed.

Search PACS Users Request/Response will adhere to the schema defined in:

- [urn:ietf:params:scim:api:messages:2.0:SearchRequest – Search Part Numbers](#)
- [urn:ietf:params:scim:api:messages:2.0:ListResponse – Display Part Number Search Result Set](#)

Sample Request URI

[POST] {Base_URI}/customer/{organization_id}/part-number/.search

Sample Request Payload

```
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:SearchRequest"
  ],
  "attributes": [
    "partNumber",
    "availableQty"
  ],
  "filter": "partNumber eq \"MOBILE-ID\"",
  "sortBy": "availableQty",
  "sortingOrder": "descending",
  "startIndex": 1,
  "count": 10
}
```

Sample Response Payload

```
HTTP/1.1 200 OK
ContentType: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/part-number/.search
{
  "schemas": ["urn:ietf:params:scim:api:messages:2.0:ListResponse"],
  "totalResults": 1,
  "itemsPerPage": 1,
  "startIndex": 1,
  "Resources": [ {
    "meta": {
      "resourceType": "PartNumber",
      "lastModified": "2016-04-18T16:52:34Z",
      "location": "{Base_URI}/customer/548/part-number/134061"
    },
    "partNumber": "MOBILE-ID",
    "availableQty": 155
  } ]
}
```

Section 09

Callbacks

9.1 Register for Callback

A new and improved Callback API has been created. Documentation for this new Callback API is available at:

[Events and Callbacks - HID Origo API Documentation \(hidglobal.com\)](https://hidglobal.com/docs/api/2.2/events-and-callbacks).

Note: The API described below is still fully functional.

Description

End user organizations can use this service to register for callback notifications on the status changes for users, invitations, devices, and credentials. Callback URL should be in HTTPS. Authentication is optional. However, only URL based BASIC Authentication is supported.

[POST] {[Base_URI](#)}/customer/{organization_id}/callback-registration

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Schema Extensions: urn:hid:scim:api:ma:2.2:CallbackRegistration

Request JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory)
callbackUrl	String	This URL is provided by the API Integrator to subscribe for status updates (required). HTTPS is mandatory. Only URL Based BASIC Authentication is supported.
meta.resourcetype	String	Callback Registration (optional).

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory)
id	String	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources.
Callback Schema Details	String	Refer to urn:hid:scim:api:ma:2.2:CallbackRegistration
meta.resourcetype	Meta	Callback Registration
meta.lastModified	Meta	Modified date time in UTC
meta.location	Meta	URI location to GET Registered Callback details

Sample Request URI

[POST] {[Base_URI](#)}/customer/{organization_id}/callback-registration

Sample Request Payload - With BASIC Authentication in Callback URL

```
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Authorization: Basic
Username : <username>
Password : <password>
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUrl": "https://username:password@localhost/callbackServlet"
  }
  "meta":{
    "resourceType": "CallbackRegistration"
  }
}
```

Sample Response Payload - With BASIC Authentication in Callback URL

```
HTTP/1.1 201 Created
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/callback-registration/61
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUrl": "https://username:password@localhost/callbackServlet"
  }
  "meta":{
    "resourceType": "CallbackRegistration",
    "lastModified": "2016-03-01T21:32:44Z",
    "location": "{Base_URI}/customer/548/callback-registration/61"
  }
}
```

Sample Request Payload - Without BASIC Authentication in Callback URL

```
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Authorization: Bearer aGwTwgAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUrl": "https://localhost/callbackServlet"
  }
  "meta":{
    "resourceType": "CallbackRegistration"
  }
}
```

Sample Response Payload - Without BASIC Authentication in Callback URL

```
HTTP/1.1 201 Created
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Authorization: {Base_URI}/customer/{organization_id}/callback-registration/61
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUrl": "https://localhost/callbackServlet"
  }
  "meta":{
    "resourceType": "CallbackRegistration",
    "lastModified": "2016-03-01T21:32:44Z",
    "location": "{Base_URI}/customer/548/callback-registration/61"
  }
}
```

9.2 Update Callback

Description

A full update is performed. End user organizations can use this service to update the registered URL.

[PUT] {Base_URI}/customer/{organization_id}/callback-registration/{callback_registration_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
CallbackRegistration -> ID	Number	Required. This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources.

Request JSON	Data Type	Min. Width x Height (Pixels)
schemas	Schema[]	Mandatory schemas supported
callbackUrl	String	Required. This URL is provided by API Integrator to subscribe for status updates.
meta.resourcetype	String	Optional. Callback Registration.

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported
id	Number	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources
Callback Schema Details	String	Refer to urn:hid:scim:api:ma:2.2:CallbackRegistration
meta.resoucetype	Meta	Callback Registration
meta.lastModified	Meta	Last modified date time in UTC
meta.location	Meta	URI location to GET Registered Callback details

Sample Request URI

[PUT] {Base_URI}/customer/{organization_id}/callback-registration/{callback_registration_id}

Sample Request Payload

```

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUrl": "https://localhostupdated.com/callbackservlet",
  },
  "meta": {
    "resourceType": "CallbackRegistration"
  }
}

```

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/callback-registration/61
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "id": 10000669,
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUrl": "https://localhostupdated.com/callbackservlet",
  },
  "meta": {
    "resourceType": "CallbackRegistration",
    "lastModified": "2016-03-01T21:32:44Z",
    "location": "{Base_URI}/customer/548/callback-registration/61"
  }
}
```

9.3 Get Callback

Description

End user organizations can use this service to retrieve the registered URL.

[GET] {Base_URI}/customer/{organization_id}/callback-registration/{callback_registration_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Response JSON	Data Type	Description
CallbackRegistration -> ID	Number	Required. This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources.

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory).
id	Number	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources.
callback Uri	String	The provided URL by API Integrator to subscribe for status updates.
meta.resourceType	Meta	Callback Registration.
meta.lastModified	Meta	Last modified date time in UTC.
meta.location	Meta	URI location to GET Callback details.

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/callback-registration/{callback_registration_id}

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/callback-registration/61
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:CallbackRegistration"
  ],
  "id": 10000669
  "urn:hid:scim:api:ma:2.2:CallbackRegistration": {
    "callbackUri": " https://localhostupdated.com/callbackservlet",
  },
  "meta": {
    "resourceType": "CallbackRegistration",
    "lastModified": "2016-03-01T21:32:44Z",
    "location": "{Base_URI}/customer/548/callback-registration/61"
  }
}
```

9.4 List Callback

Description

End user organizations can use this service to retrieve the list of registered URLs.

[GET] {Base_URI}/customer/{organization_id}/callback-registration

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Response JSON	Data Type	Description
schemas	Schema[]	Schemas supported (mandatory).
id	Number	This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources.
meta.resourceType	Meta	Callback Registration.
meta.lastModified	Meta	Last modified date time in UTC.
meta.location	Meta	URI location to GET Callback details.

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/callback-registration

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/callback-registration/61
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:ListResponse"
  ],
  "itemsPerPage": 1
  "startIndex": " 1",
  "Resources": " [
    {
      "id": 10000412.5,
      "meta": {
        "resourceType": "CallbackRegistration",
        "lastModified": "",
        "location": "{Base_URI}/credential-management/customer/1003637/callback-registration/10000412.5"
      }
    }
  ]
}
```

9.5 Un-Register from Callback

Description

End user organizations can use this service to delete the registered callback URL. This implies that the organization will stop receiving callback notifications from the Service Provider.

[DELETE] {Base_URI}/customer/{organization_id}/callback-registration/{callback_registration_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Path Parameter	Data Type	Description
CallbackRegistrationID	Number	Required. This identifier is provided by HID Global and must be unique across the Service Provider's entire set of Resources.

Sample Request URI

[DELETE] {Base_URI}/customer/{organization_id}/callback-registration/{callback_registration_id}

Sample Response Payload

Not applicable.

Sample Response Payload

HTTP/1.1 204 NO CONTENT

Section 10

Organization

10.1 Get Customer

Description

End user organizations can use this service to get details of the organization.

[GET] {Base_URI}/customer/{company_id}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported.
Id	Number	Organization ID.
Name	String	Organization name.
MobileKeysets	String	Mobile references.
subscriptionMode	String	Subscription mode such as Perpetual, Full term subscription.
totalUsers	Number	Count of total users (applicable only when "subscriptionMode" is not Perpetual).
activeUsers	Number	Count of active users.
pendingInvitations	Number	Count of pending invitations.
urn:hid:scim:api:ma:2.2:LicenseInfo	License[]	Subscription details of organization (applicable only when "subscriptionMode" is not Perpetual).

Sample Request URI

[GET] {Base_URI}/customer/{company_id}

Sample Request Payload

Not applicable

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/702054
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:LicenseInfo"
  ],
  "id": 702054,
  "name": "Subscription - Reserve Mobile ID test",
  "mobileKeysets": "MOB5041, MOB5042, MOB5043, MOB5044",
  "subscriptionMode": "Full term subscription",
  "totalUsers": 266,
  "activeUsers": 248,
  "pendingInvitations": 3,
  "urn:hid:scim:api:ma:2.2:LicenseInfo": [
    {
      "partNumber": "MOBILE-ID-SUB-T100",
      "name": "Standard",
      "availableQty": 0,
      "consumedQty": 1,
      "startDate": "2017-09-12T00:00:00Z",
      "endDate": "2017-11-07T00:00:00Z",
      "licenseState": "Full Usage",
      "periodState": "Reminder A",
      "statusMessage": "Action Needed"
    }
  ]
}
```

10.2 Get Licenses

Description

Organizations that are in Subscription Mode can use this service to get details of their Subscription.

[GET] {Base_URI}/customer/{organization_id}/licenses

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported.
urn:hid:scim:api:ma:2.2:LicenseInfo	License[]	Subscription details of the organization.

Sample Request URI

[GET] {Base_URI}/customer/{organization_id}/licenses

Sample Request Payload

Not applicable

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/702054/licenses
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:LicenseInfo"
  ],
  "urn:hid:scim:api:ma:2.2:LicenseInfo": [
    {
      "partNumber": "MOBILE-ID-SUB-T100",
      "name": "Standard",
      "availableQty": 0,
      "consumedQty": 1,
      "startDate": "2017-09-12T00:00:00Z",
      "endDate": "2017-11-07T00:00:00Z",
      "licenseState": "Full Usage",
      "periodState": "Reminder A",
      "statusMessage": "Action Needed"
    }
  ]
}
```

10.3 Get Version

Description

End user organizations can use this service to get the version of API.

[GET] {Base_URI}/customer/{customer_id}/sdk-version

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Response JSON	Data Type	Description
schemas	Schema[]	Mandatory schemas supported.
urn:hid:scim:api:ma:2.2:SDKVersion	SDKVersion	Version of MA API.
meta.resourceType	Meta	SDK Version.
meta.lastModified	Meta	Last modified date time in UTC.
meta.location	Meta	URI location to GET MA API Version details.

Sample Request URI

[GET] {Base_URI}/customer/{customer_id}/sdk-version

Sample Request Payload

Not applicable

Sample Response Payload

```
HTTP/1.1 200 OK
Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json
Location: {Base_URI}/customer/{organization_id}/sdk-version
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:SDKVersion"
  ],
  "urn:hid:scim:api:ma:2.2:SDKVersion": [
    {
      "version": "credential-management-2.2",
    }
  ],
  "meta": {
    "resourceType": "SDKVersion",
    "lastModified": "2016-03-01T21:32:44Z",
    "location": "{Base_URI}/customer/30/sdk-version"
  }
}
```

Section 11

Photo ID

11.1 Upload Photo Identity

Description

Upload Photo Identity for an existing user.

[POST] {Base_URI}/customer/{company_id}/users/{user_id}/photo

Authorization: Bearer {4tress_token}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+jpg |
 application/vnd.assaabloy.ma.credential-management-2.2+png

Photo image format	Supported	Min. Width x Height (Pixels)	Impact to APIs
JPG/JPEG	Yes	130 x 130	400 x 400
PNG	Yes	130 x 130	400 x 400

Response JSON	Data Type	Description
Id	Number	Unique Id for Photo Identity of User
status	String	Status of the Photo Identity Uploaded
meta.resourcetype	Meta	Photo
meta.lastModified	Meta	Modified data time in UTC
meta.location	Meta	URL location to GET Photo ID details

Sample Request URI

[POST] {Base_URI}/customer/548/users/10266459/photo

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "meta": {
    "resourceType": "PHOTO",
    "lastModified": "2017-11-21T11:11:59z",
    "location": "{Base_URI}/customer/548/users/10266459/photo/100"
  }
  "id": 100,
  "status": "PERSONALIZING",
}
```

11.2 Preview Photo Identity

Description

Preview Photo Identity of the user. Based on the Photo Identity retrieved, approval will be processed.

[GET] {Base_URI}/customer/{company_id}/users/{user_id}/photo/{photo_id}

Authorization: Bearer {4tress_token} | SISP-Token {base64 encoded access_token}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Sample Request URI

[GET] {Base_URI}/customer/548/users/10266459/photo/100

Sample Response Payload

```
HTTP/1.1 200 OK
<image buffer>
```

11.3 Upload Photo Identity Status

Description

Update Photo Identity status of the user.

[PUT] {Base_URI}/customer/{company_id}/users/{user_id}/photo/{photo_id}/status

Authorization: Bearer {4tress_token}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Response JSON	Data Type	Description
status	String	Status of the Photo Identity Uploaded: APPROVE REJECT

Sample Request URI

[PUT] {Base_URI}/customer/548/users/10266459/photo/100/status

```
{
  "status": "APPROVE"
}
```

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "schemas": [
    "urn:hid:scim:api:ma:2.2:User:Photo"
  ],
  "scimType": "SUCCESS"
  "detail": "Photo Id approved successfully"
  "status": 200
}
```

Sample Request URI

[PUT] {Base_URI}/customer/548/users/10266459/photo/100/status

```
{
  "status": "REJECT"
}
```

Sample Response Payload

```
HTTP/1.1 204 No Content
```

11.4 Delete Photo Identity

Description

Delete Photo Identity for an existing user.

[DELETE] {Base_URI}/customer/{company_id}/users/{user_id}/photo/{photo_id}

Authorization: Bearer {4tress_token}

Content-Type: application/vnd.assaabloy.ma.credential-management-2.2+json

Sample Request URI

[DELETE] {Base_URI}/customer/548/users/10266459/photo/100

Sample Response Payload

HTTP/1.1 200 OK

Section 12

Data

12.1 Trends

12.1.1 Expired Invitation Trend

Description

To fetch the details of expired invitations in an organization.

[GET] {Base_URI}/data/customer/{customerId}/expiredinvite/trend

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
customerId	Number	Company ID
currentValue	Number	Displays the number of users
changePercentage	Number	Difference between last two trend values in %
threshold	Number	An indicative value relative to current value. This can be used to highlight acceptable variation.
dataPoints	Number	Pair of date and value on that date

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/expiredinvite/trend

Sample Request Payload

Not applicable.

Sample Response Payload

```

HTTP/1.1 200 OK
{
  "schemas": [
    "urn:hid:scim:api:reports:2.1:TrendResponse"
  ],
  "customerId": 901853,
  "currentValue": 8,
  "changePercentage": 8,
  "threshold": 5,
  "datapoints": [
    {
      "date": "2018-09-11",
      "value": 8,
    }
  ]
}

```

12.1.2 User Not Started Trend

Description

To fetch the details of user who still have not started using the Mobile IDs in an organization.

[GET] {Base_URI}/data/customer/{customerId}/usernotstarted/trend

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
customerId	Number	Company ID
currentValue	Number	Displays the number of users
changePercentage	Number	Difference between last two trend values in %
threshold	Number	An indicative value relative to current value. This can be used to highlight acceptable variation.
dataPoints	Number	Pair of date and value on that date

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/usernotstarted/trend

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "schemas": [
    "urn:hid:scim:api:reports:2.1:TrendResponse"
  ],
  "customerId": 901853,
  "currentValue": 8,
  "changePercentage": 8,
  "threshold": 5,
  "datapoints": [
    {
      "date": "2018-09-11",
      "value": 8,
    }
  ]
}
```

12.1.3 Dormant Users Trend

Description

To fetch the details of users who remain dormant for a period of time without using Mobile IDs in an organization.

[GET] {Base_URI}/data/customer/{customerId}/dormantuser/trend

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
customerId	Number	Company ID
currentValue	Number	Displays the number of users
changePercentage	Number	Difference between last two trend values in %
threshold	Number	An indicative value relative to current value. This can be used to highlight acceptable variation.
dataPoints	Number	Pair of date and value on that date

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/dormantuser/trend

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "schemas": [
    "urn:hid:scim:api:reports:2.1:TrendResponse"
  ],
  "customerId": 901853,
  "currentValue": 8,
  "changePercentage": 8,
  "threshold": 5,
  "datapoints": [
    {
      "date": "2018-09-11",
      "value": 8,
    }
  ]
}
```

12.1.4 Unique Device Trend

Description

To fetch the details of unique devices in an organization.

[GET] {Base_URI}/data/customer/{customerId}/uniquedevicetrend

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
customerId	Number	Company ID
currentValue	Number	Displays the number of users
changePercentage	Number	Difference between last two trend values in %
threshold	Number	An indicative value relative to current value. This can be used to highlight acceptable variation.
dataPoints	Number	Pair of date and value on that date

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/uniquedevicetrend

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "schemas": [
    "urn:hid:scim:api:reports:2.1:TrendResponse"
  ],
  "customerId": 901853,
  "currentValue": 8,
  "changePercentage": 8,
  "threshold": 5,
  "datapoints": [
    {
      "date": "2018-09-11",
      "value": 8,
    }
  ]
}
```

12.1.5 App Version Trend

Description

To fetch the details of various app versions (Devices) in an organization.

[GET] {Base_URI}/data/customer/{customerId}/appversion/trend

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
customerId	Number	Company ID
currentValue	Number	Displays the number of users
changePercentage	Number	Difference between last two trend values in %
threshold	Number	An indicative value relative to current value. This can be used to highlight acceptable variation.
dataPoints	Number	Pair of date and value on that date

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/appversion/trend

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "schemas": [
    "urn:hid:scim:api:reports:2.1:TrendResponse"
  ],
  "customerId": 901853,
  "currentValue": 8,
  "changePercentage": 8,
  "threshold": 5,
  "datapoints": [
    {
      "date": "2018-09-11",
      "value": 8,
    }
  ]
}
```

12.2 Retrievals

12.2.1 Users - Expired Invitations

Description

To fetch the list of users with expired invitations in an organization.

[GET] {Base_URI}/data/customer/{customerId}/expiredinvite/users

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
userId	Number	Unique number in SISP
firstname	String	First name of user
lastname	String	Last name of user
emailId	String	Email of user
emailSentOn	Date	Date of last reminder

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/expiredinvite/users

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "users": [
    {
      "userId": 10076488,
      "firstname": "John",
      "lastname": "Smith",
      "emailId": "pruser23@abc.com",
      "emailSentOn": 2018-09-07,
    },
    {
      "userId": 10076489,
      "firstname": "Jane",
      "lastname": "Doe",
      "emailId": "pruser23@abc.com",
      "emailSentOn": null,
    },
    {
      "userId": 10076490,
      "firstname": "John",
      "lastname": "Doe",
      "emailId": "pruser21@abc.com",
      "emailSentOn": null,
    },
  ],
}
```

12.2.2 Users - Not Started

Description

To fetch the list of user details who still have not started using the Mobile IDs in an organization.

[GET] {Base_URI}/data/customer/{customerId}/usernotstarted/users

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
userId	Number	Unique number in SISP
firstname	String	First name of user
lastname	String	Last name of user
emailId	String	Email of user
emailSentOn	Date	Date of last reminder

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/usernotstarted/users

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "users": [
    {
      "userId": 10076488,
      "firstname": "John",
      "lastname": "Smith",
      "emailId": "pruser23@abc.com",
      "emailSentOn": 2018-09-07,
    },
    {
      "userId": 10076489,
      "firstname": "Jane",
      "lastname": "Doe",
      "emailId": "pruser23@abc.com",
      "emailSentOn": null,
    },
    {
      "userId": 10076490,
      "firstname": "John",
      "lastname": "Doe",
      "emailId": "pruser21@abc.com",
      "emailSentOn": null,
    },
  ],
}
```

12.2.3 Users - Dormant

Description

To fetch list of user details who remain dormant for a period of time without using Mobile IDs in an organization.

[GET] {Base_URI}/data/customer/{customerId}/dormantuser/users

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
userId	Number	Unique number in SISP
firstname	String	First name of user
lastname	String	Last name of user
emailId	String	Email of user
emailSentOn	Date	Date of last reminder

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/dormantuser/users

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "users": [
    {
      "userId": 10076488,
      "firstname": "John",
      "lastname": "Smith",
      "emailId": "pruser23@abc.com",
      "emailSentOn": 2018-09-07,
    },
    {
      "userId": 10076489,
      "firstname": "Jane",
      "lastname": "Doe",
      "emailId": "pruser23@abc.com",
      "emailSentOn": null,
    },
    {
      "userId": 10076490,
      "firstname": "John",
      "lastname": "Doe",
      "emailId": "pruser21@abc.com",
      "emailSentOn": null,
    },
  ],
}
```

12.2.4 Users - Unique Device

Description

To fetch the list of devices based on Mobile app-version, device model, and OS in an organization.

[GET] {Base_URI}/data/customer/{customerId}/uniquedevice/stats

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
totalCount	Number	Total number of unique devices in the organization
categories	List of objects	List of category names and values The category names can be: APP_VERSION, DEVICE_MODEL, and OS_VERSION The values under each category represent a list of sub-categories and count of devices in that category The count of all three categories are returned in one response

Sample Request URI

[GET] {Base_URI}/data/customer/{customerId}/uniquedevice/stats

Sample Request Payload

Not applicable.

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "schemas": [
    "urn:hid:scim:api:reports:2.1:DeviceDetailResponse"
  ],
  "totalCount": 2,
  "categories": [
    {
      "name": "APP_VERSION",
      "values": [
        {
          "name": "HID",
          "value": 2
        }
      ]
    },
    {
      "name": "DEVICE_MODEL",
      "values": [
        {
          "name": "Apple-X",
          "value": 2
        }
      ]
    },
    {
      "name": "OS_VERSION",
      "values": [
        {
          "name": "iOS-11",
          "value": 2
        }
      ]
    }
  ]
}
```

12.2.5 Users

Description

To fetch the list of users for a given category and a list of sub-categories in an organization.

Category: categories.name from /stats response

SubCategories: List of categories.values[X].name from /stats response, where X is a variable

[POST] {Base_URI}/data/customer/{customerId}/uniquedevice/users

Authorization: Bearer {4tress_token}

Authorization: application/json

Response JSON	Data Type	Description
category	String	categories.name from /stats response
subCategories	List of Strings	List of categories.values[X].name from /stats response, where X is index

Request JSON	Data Type	Description
userId	Number	Inique number in SISP
firstname	String	First name of user
lastname	String	Last name of user
emailId	String	Email of user
emailSentOn	Data	Data of last reminder

Sample Request URI

[POST] {Base_URI}/data/customer/{customerId}/uniquedevice/users

Sample Request Payload

```

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Content-Type: application/json
{
  "schemas": [
    "urn:hid:scim:api:sis:2.1:DeviceCategoryRequest"
  ],
  "category": "DEVICE_MODEL",
  "subCategories": [
    "Apple-X"
  ]
}

```

Sample Response Payload

```
HTTP/1.1 200 OK
{
  "category": "DEVICE_MODEL",
  "subCategories": [
    "Apple-X"
  ],
  "users": [
    {
      "userId": 123.0,
      "firstname": "John",
      "lastname": "Smith",
      "emailId": "john@grr.la",
      "emailSentOn": "2018-07-25"
    },
    {
      "userId": 124.0,
      "firstname": "Robert",
      "lastname": "Martin",
      "emailId": "robert@grr.la",
      "emailSentOn": "2018-07-25"
    }
  ],
  "schemas": [
    "urn:hid:scim:api:reports:2.1:ListUsersResponse"
  ]
}
```

12.3 Reminder/Alerts

12.3.1 Resend - Expired Invitations

Description

To resend invites to users in an organization.

[POST] {[Base_URI](#)}/data/customer/{customerId}/expiredinvite/resend

Authorization: Bearer {4tress_token}

Response JSON	Data Type	Description
emailId	String	List of user emails to be reminded

Sample Request URI

[POST] {[Base_URI](#)}/data/customer/{customerId}/expiredinvite/resend

Sample Request Payload

```

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Content-Type: application/json
{
  "schemas": [
    "urn:hid:scim:api:sis:2.1:DormantInvitationReminderRequest"
  ],
  "emailId": 10076488,
  "test@test.com": "John",
  "test2@test.com": "Smith",
]
}

```

Sample Response Payload

```

HTTP/1.1 200 OK

```

12.3.2 Reminder - User Not Started

Description

To fetch the list of user details who still have not started using the Mobile IDs in an organization.

[POST] {Base_URI}/data/customer/{customerId}/usernotstarted/reminder

Authorization: Bearer {4tress_token}

Content-Type: application/json

Sample Request URI

[POST] {Base_URI}/data/customer/{customerId}/usernotstarted/reminder

Sample Request Payload

```
Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Content-Type: application/json
{
  "schemas": [
    "urn:hid:scim:api:sis:2.1:DormantInvitationReminderRequest"
  ],
  "subject": "Sample",
  "template": "Sample text",
  "fromEmailId": "admin@example.com",
  "emailIds": [
    "test@test.com": "John",
    "test2@test.com": "Smith",
  ],
  "adminFirstname": "adminfirst",
  "adminLastname": "adminlast"
}
```

Sample Response Payload

```
HTTP/1.1 200 OK
```

12.3.3 Reminder - Dormant User

Description

To fetch list of user details who remain dormant for a period of time without using Mobile IDs in an organization.

[POST] {Base_URI}/data/customer/{customerId}/dormantuser/reminder

Authorization: Bearer {4tress_token}

Content-Type: application/json

Response JSON	Data Type	Description
subject	String	Subject of email
template	String	Text of email
fromEmailId	String	From email to be shown
emailIds	List of strings	List of user emails to be reminded
adminFirstname	String	Admin first name
adminLastname	String	Admin last name

Sample Request URI

[POST] {Base_URI}/data/customer/{customerId}/dormantuser/reminder

Sample Request Payload

```

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Content-Type: application/json
{
  "schemas": [
    "urn:hid:scim:api:sis:2.1:DormantInvitationReminderRequest"
  ],
  "subject": "Sample",
  "template": "Sample text",
  "fromEmailId": "admin@example.com",
  "emailIds": [
    "test@test.com": "John",
    "test2@test.com": "Smith",
  ],
  "adminFirstname": "adminfirst",
  "adminLastname": "adminlast"
}

```

Sample Response Payload

HTTP/1.1 200 OK

12.3.4 Alerts - Unique Device

Description

To alert users based on app/OS versions in an organization.

[POST] {Base_URI}/data/customer/{customerId}/uniquedevice/alerts

Authorization: Bearer {4tress_token}

Content-Type: application/json

Response JSON	Data Type	Description
subject	String	Subject of email
template	String	Text of email
fromEmailId	String	From email to be shown
emailIds	List of strings	List of user emails to be reminded
adminFirstname	String	Admin first name
adminLastname	String	Admin last name

Sample Request URI

[POST] {Base_URI}/data/customer/{customerId}/uniquedevice/alerts

Sample Request Payload

```

Authorization: Bearer aGwTwgAAAVDMq/0wj12EApDTNHgCQbJZyK1GbsTD
Content-Type: application/json
{
  "schemas": [
    "urn:hid:scim:api:sis:2.1:DormantInvitationReminderRequest"
  ],
  "alertType": "{alertType}",
  "template": "Hi How are you?",
  "subject": "Hi",
  "fromEmailId": "admin@example.com",
  "emailIds": ["test@test.com", "test2@test.com"],
  "adminFirstname": "adminfirst",
  "adminLastname": "adminlast"
}

```

Sample Response Payload

```

HTTP/1.1 200 OK

```

Section 13

Error Handling

13.1 HTTP Error Codes

Code	Description	Applicability	Description
400	BAD REQUEST	GET, POST, PUT, DELETE	Request cannot be parsed, is syntactically incorrect, or violates the schema
401	UNAUTHORIZED	GET, POST, PUT, DELETE	Authorization failure
403	FORBIDDEN	GET, POST, PUT, DELETE	The server does not support the requested operation
404	NOT FOUND	GET, PUT, DELETE	Specified resource: for example, user does not exist or request URL is invalid
409	CONFLICT	POST, PUT, DELETE	The specified version number does not match the resource latest version number or a Service Provider refused to create a new, duplicate resource
412	PRECONDITION FAILED	POST, PUT, DELETE	Failed to update as Resource {id} changed on the server last retrieved
413	REQUEST ENTITY TOO LARGE	POST, PUT	{ "maxOperations": 1000, "maxPayload": 1048576 }
500	INTERNAL SERVER ERROR	GET, POST, PUT, DELETE	An internal error. Implementers should provide descriptive debugging advice
501	NOT IMPLEMENTED	GET, POST, PUT, DELETE	Service Provider does not support the request operation: for example, PATCH

Sample Error in Response to a non-existent GET Request

HTTP/1.1 404 NOT FOUND

```
{
  "Errors": [
    {
      "schemas": ["urn:hid:scim:api:ma:2.2:Error"],
      "scimType": "invalidSyntax",
      "detail": "Attribute Given Name should have min 2 characters and max 100 characters.",
      "status": 400
    }
  ]
}
```

13.2 Application Code Errors

13.2.1 Users

API Service	URL	Response Code	Description
Enroll User	[POST] {Base_URI}/customer/{organization_id}/users	201 CREATED	Enroll User and Provided User Actions completed successfully
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details.
		409 CONFLICT	User with email ID Already Exists in the company
		412 PRECONDITION FAILED	Prerequisite to perform the operation evaluated to false
		412 PRECONDITION FAILED (Subscription Specific) Scenario: Organization's Subscription state is not valid	Response: {"schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "mutability", "detail" : "We are unable to perform the requested action as there is Subscription state violation", "status" : 412 }
		400 BAD REQUEST Custom SIO scenario: When both attributes "cardData" and "Credential" are used in the payload	Response: {"schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "invalidSyntact", "detail" : "You have performed an invalid action", "status" : 400 }
		500 SERVER ERROR	We could not return the representation due to an internal server error
Update User	[PUT] {Base_URI}/customer/{organization_id}/users/{user_id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details.
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		409 CONFLICT	User with email ID Already Exists in the company
		500 SERVER ERROR	We could not return the representation due to an internal server error

API Service	URL	Response Code	Description
Get User	[GET] {Base_URI}/customer/{organization_id}/users/{user_id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
List User	[GET] {Base_URI}/customer/{organization_id}/users	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Search User	[POST] {Base_URI}/customer/{organization_id}/users/.search	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details.
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Delete User	[DELETE] {Base_URI}/customer/{organization_id}/users/{user_id}	204 NO CONTENT	The 204 response must not include a message-body, and thus is always terminated by the first empty line after the header fields
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED	Prerequisite to perform the operation evaluated to false
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.2 Invitations

API Service	URL	Response Code	Description
Create invitation	[POST] {Base_URI}/customer/{organization_id}/users/{user_id}/invitation	201 CREATED	Create Invitation and Provided PACS User Actions completed successfully
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED (Subscription Specific) Scenario: Organization's Subscription state is not valid	Prerequisite to perform the operation evaluated to false: Response: <pre>{ "schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "mutability", "detail" : "We are unable to perform the requested action as there is Subscription state violation", "status" : 412 }</pre>
		412 PRECONDITION FAILED (Subscription Specific) Scenario: User has pending or redeemed invitations whose count equals the upper limit allowed per his subscription tier. No new invitations can be created.	Response: <pre>{ "schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "mutability", "detail" : "We are unable to perform the requested action as the count of Credential Containers allowed for the Subscription tier has exceeded", "status" : 412 }</pre>
		400 BAD REQUEST Custom SIO scenario: When both attributes "cardData" and "Credential" are used in the payload	Response: <pre>{ "schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "invalidSyntax", "detail" : "You have performed an invalid action", "status" : 400 }</pre>
		500 SERVER ERROR	We could not return the representation due to an internal server error

API Service	URL	Response Code	Description
Get invitation	[GET] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
List invitation	[GET] {Base_URI}/customer/{organization_id}/users/{user_id}/invitation	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Search invitation	[POST]{version}/customer/{organization_id}/users/{user_id}/invitation/.search	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Cancel invitation	[DELETE] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}	204 NO CONTENT	The 204 response must not include a message-body, and thus is always terminated by the first empty line after the header fields
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED	Prerequisite to perform the operation evaluated to false
		500 SERVER ERROR	We could not return the representation due to an internal server error

API Service	URL	Response Code	Description
Send invitation	[POST] {Base_URI}/customer/{organization_id}/invitation/{invitation_id}/email	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAuth Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED	Prerequisite to perform the operation evaluated to false
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.3 Part Numbers

API Service	URL	Response Code	Description
Get Part Number	[GET] {Base_URI}/customer/{organization_id}/part-number/{part-number_id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
List Part Number	[GET] {Base_URI}/customer/{organization_id}/part-number	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Search Part Number	[POST] {Base_URI}/customer/{organization_id}/part-number/.search	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.4 Credential Container

API Service	URL	Response Code	Description
Get Credential Container	[GET] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
List Credential Container	[GET] {Base_URI}/customer/{organization_id}/users/{user_id}/credential-container	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Delete Credential Container	[DELETE] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}	204 NO CONTENT	The 204 response must not include a message-body, and thus is always terminated by the first empty line after the header fields.
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.5 Credential

API Service	URL	Response Code	Description
Get Credential	[GET] {Base_URI}/customer/{organization_id}/credential/{credential_id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
List Credential	[GET] {Base_URI}/customer/{organization_id}/credential-container/{device_id}/credential	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
	[GET] {Base_URI}/customer/{organization_id}/part-number/{part_number_id}/credential	500 SERVER ERROR	We could not return the representation due to an internal server error
Search Credential	[POST] {Base_URI}/customer/{organization_id}/part-number/{part_number_id}/credential/.search	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error

API Service	URL	Response Code	Description
Issue Credential	[POST] {Base_URI}/customer/{organization_id}/credential-container/{credential_container_id}/credential	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST Custom SIO scenario: When both attributes "cardData" and "Credential" are used in the payload	Response: <pre>{ "schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "invalidSyntax", "detail" : "You have performed an invalid action", "status" : 400 }</pre>
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED (Subscription Specific) Scenario: Organization's Subscription state is not valid	Prerequisite to perform the operation evaluated to false: Response: <pre>{ "schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "mutability", "detail" : "We are unable to perform the requested action as there is Subscription state violation", "status" : 412 }</pre>
		412 PRECONDITION FAILED (Subscription Specific) Scenario: User has pending or redeemed invitations whose count equals the upper limit allowed per his subscription tier. No new invitations can be created.	Response: <pre>{ "schemas" : ["urn:hid:scim:api:ma:2.2:Error"], "scimType" : "mutability", "detail" : "We are unable to perform the requested action as the count of Credential Containers allowed for the Subscription tier has exceeded", "status" : 412 }</pre>
		500 SERVER ERROR	We could not return the representation due to an internal server error

API Service	URL	Response Code	Description
Revoke Credential	[DELETE] {Base_URI}/customer/ {organization_id}/credential/ {credential_id}	204 NO CONTENT	The 204 response must not include a message-body, and thus is always terminated by the first empty line after the header fields
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED	Prerequisite to perform the operation evaluated to false
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.6 Callback

API Service	URL	Response Code	Description
Register Callback	[POST] {Base_URI}/customer/{organization_id}/callback-registration	201 CREATED	Registers the callback for the company
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details.
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED	Prerequisite to perform the operation evaluated to false
		500 SERVER ERROR	We could not return the representation due to an internal server error
Update Callback	[PUT] {Base_URI}/customer/{organization_id}/callback-registration/{callback_registration_id}	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST	The provided data failed validation. Inspect the response body for details.
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
List Callback	[GET] {Base_URI}/customer/{organization_id}/callback-registration	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error

API Service	URL	Response Code	Description
Get Callback	[GET] {Base_URI}/customer/{organization_id}/callback-registration/{callback registration id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAuth Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
Unregister Callback	[DELETE] {Base_URI}/customer/{organization_id}/callback-registration/{callback registration id}	204 NO CONTENT	The 204 response must not include a message-body, and thus is always terminated by the first empty line after the header fields.
		401 UNAUTHORIZED	Provided OAuth Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		412 PRECONDITION FAILED	Provided OAuth Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Get Version	[GET] {Base_URI}/customer/{organization_id}/sdk-version	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAuth Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.7 Customer

API Service	URL	Response Code	Description
Get Organization	[GET] {Base_URI}/customer/{organization_id}/	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error
Get Licenses	[GET] {Base_URI}/customer/{organization_id}/licenses	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.8 Photo ID

API Service	URL	Response Code	Description
Upload Photo ID	[POST] {Base_URI}/customer/{customer_id}/users/{user_id}/photo	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST	Please verify the content of the image uploaded.
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	The system cannot find the resource based on the specified URI
		500 SERVER ERROR	We could not return the representation due to an internal server error
Preview Photo ID	[GET] {Base_URI}/customer/{customer_id}/users/{user_id}/photo/{photo id}	200 OK	The request was successful and the response body contains the representation requested
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 NOT FOUND	Request Photo ID is not available
		500 SERVER ERROR	We could not return the representation due to an internal server error
Update Photo ID	[GET] {Base_URI}/customer/{customer_id}/users/{user_id}/photo/{photo id}/status	200 OK	The request was successful and the response body contains the representation requested
		400 BAD REQUEST	The requested Photo ID is not in valid state to perform the action
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 RESOURCE NOT FOUND	Request Photo ID is not available
		500 SERVER ERROR	We could not return the representation due to an internal server error
Delete Photo ID	[DELETE] {Base_URI}/customer/{customer_id}/users/{user_id}/photo/{photo id}	204 NO CONTENT	The 204 response must not include a message-body, and thus is always terminated by the first empty line after the header fields
		401 UNAUTHORIZED	Provided OAUTH Token to authenticate is invalid
		404 RESOURCE NOT FOUND	Request Photo ID is not available
		500 SERVER ERROR	We could not return the representation due to an internal server error

13.2.9 Meta Endpoints

API Service	URL	Response Code	Description
Service Provider Config	[GET] {Base_URI}/customer/{organization_id}/serviceProviderConfig	200 OK	The request was successful and the response body contains the representation requested
		500 SERVER ERROR	We could not return the representation due to an internal server error
Resource Type	[GET] {Base_URI}/customer/{organization_id}/resourceTypes	200 OK	The request was successful and the response body contains the representation requested
		500 SERVER ERROR	We could not return the representation due to an internal server error
Schemas	[GET] {Base_URI}/customer/{organization_id}/schemas/{schema}.string	200 OK	The request was successful and the response body contains the representation requested
		500 SERVER ERROR	We could not return the representation due to an internal server error

Section 14

Known Limitations

14.1 Known limitations

The following is a list of known limitations with the current release of the HID Origo Mobile Identities API:

- The `Accept` HTTP header only has limited support. `Content-Type` should be included with requests without a payload to control versioning of the API.
- The `cardNumber` property may be both of string and number type depending on endpoint called.
- If the `description` field is included in the list of attributes when searching for Part Numbers, the field will be named `undefined` in the response.
- Photo ID: The returned `Content-Type` HTTP header is `image/jpg` for png images.

Revision history

Date	Description	Revision
October 2021	- Section 1.1 Document scope. Added link to primary documentation space for HID Origo APIs. - Section 4.1 Create User. Added attributes for "Phone no (value)" and "Phone no (type)". - Section 9.1 Register for Callback. Added link to new and improved Callback API. - Section 14 Known Limitations. New section added.	B.6
May 2021	- Section 2.5.7 urn:hid:scim:api:ma:2.2:Notification. Updated Callback Attribute Name. - Section 2.5.8 urn:hid:scim:api:ma:2.2:LicenseInfo. Updated the "licenseState" and "periodState" option lists.	B.5
April 2021	New section added. Section 2.2.4 Accept header support.	B.4
March 2021	Updates to the following Sections: 2.2.3, 2.5.4, 2.5.7, 2.5.8, 2.6.7, 2.6.8, 4.2, 5.1, 5.4, 5.5, 7.1, 7.2, 7.3, 8.1, 9.2, 9.3, 10.1, 10.2, 11.1, 11.3, 13.1, 13.2.	B.3
March 2021	- Section 2.3 Authentication and Authorization. Updated section to remove Legacy Identity Provider. - Section 9.1 Register for Callback. Updated code listing for: - Sample Request Payload - With BASIC Authentication in Callback URL - Sample Response Payload - With BASIC Authentication in Callback URL	B.2
August 2020	Section 2.3 Authentication and Authorization. Section updated for generating a Bearer Token using PKI Certificate.	B.1
June 2020	Added new Section: Authentication and Authorization (replaces previous Section 2.6 Authentication, Section 2.7 Authorization, and Section 3.1 Application identifiers)	B.0
October 2019	Response codes added for List Callback in Section 13.2.6 Callback.	A.9
October 2019	Added Section 9.4 List Callback.	A.8
September 2019	- Section 2.4.3 urn:hid:scim:api:ma:2.2:Credential. - Section 2.4.4 urn:hid:scim:api:ma:2.2:UserAction. - Section 4.1 Create User. - Section 4.2 Get User. - Section 5.1 Create Invitation. - Section 6.1 Get Credential Container. - Section 7.1 Get Credential. - Section 7.3 Issue Credential. - Section 13.2 Application Code Errors: - Users -> Enroll users. - Invitations -> Create Invitations. - Credential -> Issue Credential. - Updated schema version number throughout document.	A.7
May 2019	Updated Section 4.6 Delete User for Prevent mass deletions.	A.6
December 2018	Added Section 12 Data.	A.5

Date	Description	Revision
July 2018	• Updates for Mobile Access API 2.1 Specification. • Section 1.4 Version information. • Section 1.5.2 Migrate from version 2.0 to 2.1. New section added. • Section 2.3.9 Photo ID. New section added. • Section 2.4.12 urn:hid:scim:api:ma:2.2:User:Photo. New section added. • Section 4.1 Create User. Added new fields for Title and Suffix details of a user. • Section 4.2 Get User. Added new fields for Title and Suffix details of a user. • Section 4.5 Update User. Added new fields for Title and Suffix details of a user. • Section 11 Photo ID. New section added. • Section 13.2.8 Photo ID. New section added for Photo ID error codes.	A.4
March 2018	Restructured document for better organization of schema extensions. Formatting and typographical updates.	A.3
June 2017	Removed Architecture section.	A.2
June 2017	Updated to SDK Version 1.22. Updated information in Section 2.16.1 and Section 2.16.4.	A.1
November 2016	Updated to latest HID documentation template.	A.0



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