OTGC
Onboarding Tool and Generic Client Hands-on Training of OTGC

OCF EU Developer Training (updated October 2021)

DEKRA Testing and Certification, S.A.U.

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• **Onboarding Tool (OBT)**
A logical entity within a specific IoT network that establishes ownership for a specific device and helps bring the device into operational state within that network. A typical OBT implements DOTS (Device Owner Transfer Service), AMS (Access Management Service) and CMS (Credential Management Service) functionality.

• **Onboarding Tool and Generic Client (OTGC)**
A logical entity that implements the functions of an OBT and a Generic Client.

• **Onboarding**
Process that consists in owning an OCF device by the OTGC.

• **Offboarding**
Process that consists in releasing an OCF device owed by the OTGC.
Terms and Definitions (II)

- **OCF Server**
  A sensor or actuator capable to generate a measurement or perform an action.

- **OCF Client**
  A device capable to scan and control OCF Servers.

- **OCF Device**
  A device (Server or Client) that can be integrated into an OCF network created by the OTGC. The OTGC will transfer ownership to this OCF Device by different OTM (Onboarding Transfer Methods).
<table>
<thead>
<tr>
<th>Operating System</th>
<th>Code Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Android</td>
<td>OS dependent</td>
</tr>
<tr>
<td>iOS</td>
<td>OS dependent</td>
</tr>
<tr>
<td>Windows</td>
<td>OS dependent</td>
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<tr>
<td>Linux</td>
<td>OS dependent</td>
</tr>
</tbody>
</table>
OTGC Resources - Android

**OTGC binary** (Android apk) available publicly at OCF GitHub Developers Area:

https://github.com/openconnectivityfoundation/development-support/tree/master/otgc

Current version (October 2021) for otgc-Android is v3.1.0

**OTGC sources** available publicly at OCF GitHub:

OTGC Android ➔ https://github.com/openconnectivity/otgc-android
OTGC IoTivity ➔ https://github.com/iotivity/iotivity-lite

OTGC is an open source code so can be modified by manufacturers to incorporate proprietary features and/or branding graphical material.
OTGC Resources - Linux

OTGC binary needs to be build from source code:
See the readme of: https://github.com/iotivity/otgc-linux
Build command:
curl https://iotivity.github.io/otgc-linux/setup.sh | bash

Current version (October 2021) of otgc-Linux is v 3.1.0

OTGC sources available publicly at OCF GitHub:

OTGC Linux ➔ https://github.com/openconnectivity/otgc-linux
OTGC IoTivity ➔ https://github.com/iotivity/iotivity-lite

OTGC is an open source code so can be modified by manufacturers to incorporate proprietary features and or branding graphical material.
OTGC Installation

Permissions
In order to ensure that the application can be executed correctly, we need the following permission:

Location: to display the list of available Wi-Fi networks.
Storage: to create databases for security's management.

DENY  GRANT

Allow OTGC to access this device's location?

1 of 2  DENY  ALLOW

Allow OTGC to access photos, media, and files on your device?

2 of 2  DENY  ALLOW
OTGC Scanning + Onboarding

[Images of mobile screens showing device naming and PIN input]

OPEN CONNECTIVITY FOUNDATION
OTGC Device Operation (I)
OTGC Device Operation (II)

Access Control

1. Connection type: Anonymous
   /oic/res
   /oic/d
   /oic/p

2. Connection type: Authenticated
   /oic/res
   /oic/d
   /oic/p

3. Connection type: Anonymous
   /oic/sec/doxy

4. Connection type: Authenticated
   /oic/sec/doxy

5. Connection type: Authenticated
   /switch

Create Access Policy

Subject type
- UUID
- Role
- Connection type

UUID

/oic/sec/doxm
/oic/sec/pstat
/oic/sec/acl2
/oic/sec/cred
/oic/sec/ctrl
/oic/sec/csr
OTGC Device Operation (III)

 Credentials

 UUID: bbcaae4ea-d417-460b-aba6b-efe7586730c2
 [SYMMETRIC_PAIR_WISE_KEY]

 Install Credential

 Credential type
 - Identity
 - Role

 Install Credential

 Credential type
 - Identity
 - Role

 Role ID

 Role Authority
OTGC Device Operation (IV)

OCF Developer kit

Device name
OCF Developer kit

Spec version uri
ocf:1.0.0

Device ID
12345678-1234-1234-1234-123456789012

Data model
ocf:res:1.0.0,ocf.sh:1.0.0

Protocol independent ID
laled9569-ecf9-4cc6-8162-241a50da02683

Localized descriptions

Software version

Manufacturer name
Vorteq

Model number