

**OCF “Ipanema” – discovery through /.well-known/core – Core Technology WG CR 3266**

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### 11.2.6 Multicast discovery using *"/.well-known/core"*

Generic requirements for use of CoAP multicast are provided in clause 12.2.9. Devices that join the All CoAP Nodes multicast group as optionally defined in clause 12.2.9 may also support multicast retrieval from *"/.well-known/core"* (see IETF RFC 7252). A Server node shall join at least both the link-local scoped address FF02::FD and the site-local scoped address FF05::FD. IPv6 addresses of other scopes may also be enabled. A Device responding to a request received on *"/.well-known/core"* shall encode the payload using the Core link format, which is a Content-Format of "40" (application/link-format) as defined in IETF RFC 6690. Core links in the response payload shall have a Content-Format code ("ct" attribute) of "10000" ("application/vnd.ocf+cbor"). This Content-Format code shall be used in subsequent requests and responses to obtain further Device Resource information.

A Client may send a multicast request to *"/.well-known/core"* to discover Devices that have joined the All CoAP Nodes multicast group. However, non-OCF Devices may also respond to this request. In order to filter out these non-OCF Devices, a Client may use "rt" query parameters so that only OCF Devices respond. A Server shall support querying for the "oic.wk.res" Resource Type as an "rt" query parameter value. A Client issuing such a request is equivalent to searching for all Devices. The Server shall also support querying for a Device Type as an "rt" query parameter value and respond when the Device Type matches the "rt" query parameter value.

Devices that support this optional discovery mechanism shall return as a minimum the Core link to the *"/oic/res"* Resource so that discovery of further Resources may be performed with a RETRIEVE operation to the URL of the discovered *"/oic/res"* Resource. The returned URL shall be fully qualified.

The "rt" and "if" attribute shall also be included in the response. The "rt" attribute shall include "oic.wk.res" and the "rt" value of the Device Type. The "if" attribute shall include the OCF Interfaces exposed by *"/oic/res"*.

Example of a query for all Devices:

```
Req: GET coap://[FF02::FD]:5683/.well-known/core?rt=oic.wk.res
Res: 2.05 Content, Content-Format: 40
    <coap://[fe80::b1d6]:1111/oic/res>;ct=10000;rt="oic.wk.res
    oic.d.sensor";if="oic.if.11 oic.if.baseline";
```

Example of a query for a specific Device Type:

```
Req: GET coap://[FF02::FD]:5683/.well-known/core?rt=oic.d.sensor
Res: 2.05 Content, Content-Format: 40
    <coap://[fe80::b1d6]:1111/oic/res>;ct=10000;rt="oic.wk.res oic.d.sensor";
    if="oic.if.11 oic.if.baseline"
```