Content Delivery Network Interconnection (CDNI) Request Routing: CDNI
Footprint and Capabilities Advertisement using ALTO

draft-ietf-alto-cdni-request-routing-alto-12

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Current Status

Progress:

- Closely worked with ***Unified Properties*** and followed its latest updates

Changes from -11 to -12:

- Make the new service easier adapt to other CDNI interfaces beyond FCI
  - application/alto-cdnifci+json -> application/alto-cdni+json
  - cdni-fci -> cdni-advertisement
- Updated Unified Properties related section
  - Clearly defined new entity domain types and new entity property type
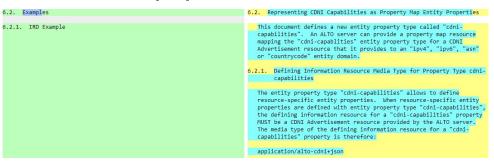
Generalize Media Types and Attribute Names

We generalized media types and attribute names of the new services to make FCI a special case.

Media Type

```
3.1.  Media Type

    The media type of the CDNI FCI resource is "application/alto-
    cdnifci+json".

    object {
        CDNIFCIData cdni-fci;
    } InfoResourceCDNIFCI : ResponseEntityBase;

    object {
        BaseAdvertisementObject capabilities<1..*>;
    } CDNIFCIData;
```

Response

```
    "application/alto-cdnifcifilter+json" which is a JSON object of type
    ReqFilteredCDNIFCI, where:

    object {
        JSONString capability-type;
        JSONValue capability-value;
    } CDNIFCICapability;

    object {
        [CDNIFCICapability cdni-fci-capabilities<0..*>;]
    } ReqFilteredCDNIFCI;
```

Request

```
3.1.  Media Type

    The media type of the CDNI Advertisement resource is "application/
    alto-cdni+json".

    object {
        CDNIAdvertisementData cdni-advertisement;
    } InfoResourceCDNIAdvertisement : ResponseEntityBase;

    object {
        BaseAdvertisementObject capabilities-with-footprints<0..*>;
    } CDNIAdvertisementData;
```

```
    media type "application/alto-cdnifilter+json" which is a JSON object
    of type ReqFilteredCDNIAdvertisement, where:

    object {
        JSONString capability-type;
        JSONValue capability-value;
    } CDNICapability;

    object {
        [CDNIFCICapability cdni-capabilities<0..*>;]
    } ReqFilteredCDNIAdvertisement;
```

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Dependency on Unified Properties

- Representing Footprint Objects as Property Map Entities
  - ipv4cidr, ipv6cidr -> ipv4, ipv6
  - altopid -> pid
  - New entity domain type: asn, countrycode
- Representing CDNI Capabilities as Property Map Entity Properties
  - New entity property type: **cdni-capabilities**
  - **Defining information resource media type** for property type **cdni-capabilities**: *application/alto-cdni+json*
    - Refer to **Sec 4.7 of draft-ietf-alto-unified-props-new-12**

6.2. Examples	6.2. Representing CDNI Capabilities as Property Map Entity Properties
6.2.1. IRD Example	This document defines a new entity property type called "cdni-capabilities". An ALTO server can provide a property map resource mapping the "cdni-capabilities" entity property type for a CDNI Advertisement resource that it provides to an "ipv4", "ipv6", "asn" or "countrycode" entity domain.
	6.2.1. Defining Information Resource Media Type for Property Type cdni-capabilities
	The entity property type "cdni-capabilities" allows to define resource-specific entity properties. When resource-specific entity properties are defined with entity property type "cdni-capabilities", the defining information resource for a "cdni-capabilities" property MUST be a CDNI Advertisement resource provided by the ALTO server. The media type of the defining information resource for a "cdni-capabilities" property is therefore:
	application/alto-cdni+json

Next Steps

- Follow UP and move to next stage