

Content Delivery Network Interconnection (CDNI) Request

Routing: CDNI

Footprint and Capabilities Advertisement using ALTO

[draft-ietf-alto-cdni-request-routing-alto-11](#)

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Current Status

Progress:

- Addressed comments from WGLC

Changes from -08 to -11:

- Addressed comments from ALTO and CDNI WG (Thanks Danny, Sanjay, Kevin)
 - Improved wording and fixed nits
- Fixed grammar issues and updated settings in examples
- Clean up background and security considerations

Remaining Issue: dependency on Unified Properties

Update Examples

- Intended update: change the delivery-protocols of the first FCI advertisement object from http/1.1 to https/1.1
- JSON merge patch in the previous example was wrong (the remaining objects were removed)
- Updated the example to use full replacement instead

```
event: application/merge-patch+json,my-default-cdnifci
data: {
  data: {
    data: "meta": {
      data: "vtag": {
        data: "tag": "dasdfa10ce8b059740bddsfasd8eb1d47853716"
      }
    },
    data: "cdni-fci": {
      data: "capabilities": [
        data: {
          data: "capability-type": "FCI.DeliveryProtocol",
          data: "capability-value": {
            data: "delivery-protocols": [
              data: "http/1.1"
            ]
          },
          data: "footprints": [
            data: <Footprint objects in only http/1.1>
          ]
        }
      ]
    }
  }
}
```

```
event: application/alto-cdnifci+json,my-cdnifci-stream
data: {
  data: {
    data: "meta": {
      data: "vtag": {
        data: "tag": "dasdfa10ce8b059740bddsfasd8eb1d47853716"
      }
    },
    data: "cdni-fci": {
      data: "capabilities": [
        data: {
          data: "capability-type": "FCI.DeliveryProtocol",
          data: "capability-value": {
            data: "delivery-protocols": [
              data: "https/1.1"
            ]
          },
          data: "footprints": [
            data: { "footprint-type": "ipv4cidr",
              data: "footprint-value": [ "203.0.113.0/24" ]
            }
          ]
        }
      ],
      data: { ... other FCI advertisement object ... }
    }
  }
}
```

Update Examples (Cont.)

- For updates of FCI using "altopid" footprint,
- changed the example to subscribe both FCI resource and the dependent network map resource.

```
{ "add": {  
  "my-network-map-cdnifci-stream": {  
    "resource-id": "my-cdnifci-with-pid-footprints"  
  }  
}
```

```
HTTP/1.1 200 OK  
Connection: keep-alive  
Content-Type: text/event-stream
```

```
event: application/alto-updatestreamcontrol+json  
data: {"control-uri":  
data: "http://alto.example.com/updates/streams/3141592653590"}
```

```
event: application/alto-cdnifci+json,my-fci-stream  
data: { ... full CDNI FCI resource ... }
```

```
event: application/merge-patch+json,my-fci-stream  
data: {
```

```
{ "add": {  
  "my-eu-netmap-stream": {  
    "resource-id": "my-eu-netmap"  
  },  
  "my-netmap-cdnifci-stream": {  
    "resource-id": "my-cdnifci-with-pid-footprints"  
  }  
}
```

```
HTTP/1.1 200 OK  
Connection: keep-alive  
Content-Type: text/event-stream
```

```
event: application/alto-updatestreamcontrol+json  
data: {"control-uri":  
data: "http://alto.example.com/updates/streams/3141592653590"}
```

```
event: application/alto-networkmap+json,my-eu-netmap-stream  
data: { ... full Network Map of my-eu-netmap ... }
```

```
event: application/alto-cdnifci+json,my-netmap-cdnifci-stream  
data: { ... full CDNI FCI resource ... }
```

Dependency on Unified Properties

- Section 6 uses the property map to provide mapping "footprints -> cdni-fci-capabilities"
- The property map related IANA registries may be updated according to the later revision of [draft-ietf-alto-unified-props-new](#)
 - The entity property type "cdni-fci-capabilities" is resource-specific (can only be associated with CDNI FCI resources)
 - The related resource-specific constraint should be mentioned in this document
- The property map can also be used to query "cdni-fci-capabilities" property of PID entities if "altopid" footprint is used
 - The associated resource of the PID domain must be the dependent network map, instead of the CDNI FCI resource

Next Steps

- Update property map related part after UP stabilized
- Move to next stage