

CDNI Core Metadata

(draft-caulfield-cdni-metadata-core-00)

CDNI Working Group
IETF 82 Taipei, Taiwan
November 16, 2011

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Goals

1. Identify fundamental set of metadata for interconnected CDNs (“core metadata”)
2. Define data model for structuring metadata
3. Suggest encoding and transport options (no intention to specify any details)

Core Metadata

1. Acquisition Metadata

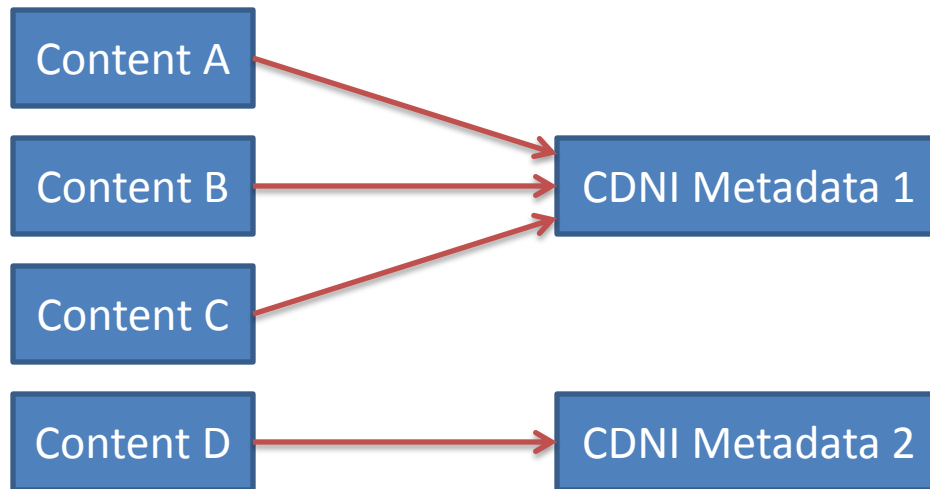
- protocol (HTTP, FTP, ...)
- URI (origin server or uCDN)
- authentication (HTTP Basic, Digest, ...)

2. Delivery Metadata

- protocol (HTTP, FTP, RTSP, ...)
- region (subnet, AS #, ...)
- time window (start, end)
- permission (allow, deny)
- authorization (URL signing, ...)

Data Model

1. Each content associated with a single CDNI Metadata object
2. Each CDNI Metadata object may be associated with multiple pieces of content



CDNI Metadata object

Consists of three parts:

1. list of acquisition options (content sources)
 - identifies origin servers and uCDNs
2. list of delivery profiles
 - specifies rules and restrictions for delivery
3. metadata scope
 - allows a single CDNI Metadata object to describe the metadata for multiple pieces of content

Metadata Scope

Describes a set of content by:

1. host
2. resource
3. protocol

Parameters extracted from user-agent requests

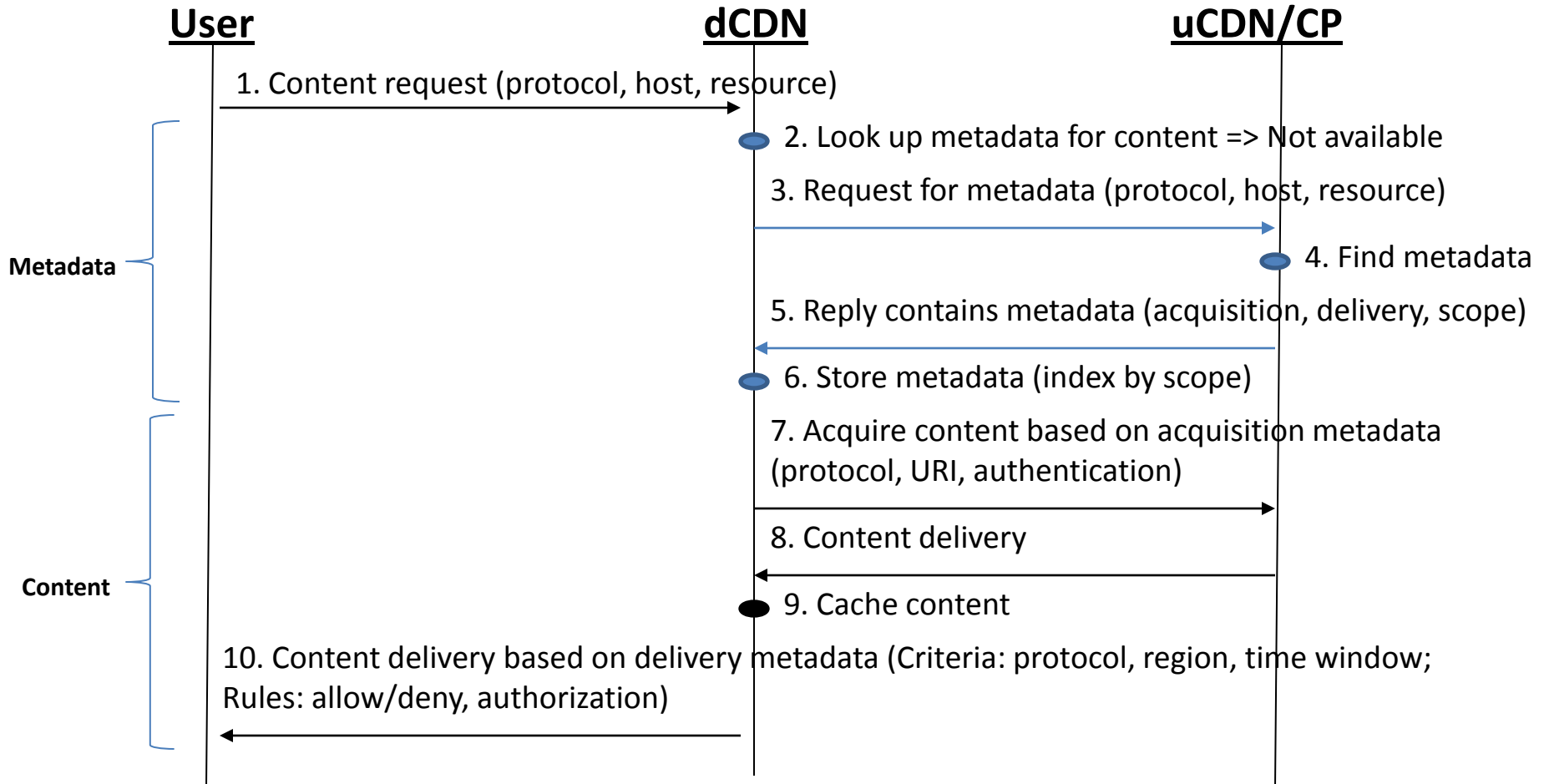
Metadata scope allows client requests to be mapped to CDNI Metadata objects

Encoding and Transport

1. XML or JSON encoding assumed
2. HTTP transport assumed
 - GET with query string used to find metadata

Putting It All Together

dCDN: Downstream CDN
uCDN: Upstream CDN
CP: Content Provider



XML Example (1/2)

```
<CDNIMetadata>
  <ContentSource>
    <protocol>http</protocol>
    <uri>http://origin.example.com/movies/{content}</uri>
    <auth>
      <type>basic</type>
      <username>abcd</username>
      <password>pass123</password>
    </auth>
  </ContentSource>
```

...continued...

XML Example (2/2)

```
<ContentDelivery>
  <DeliveryCriteria>
    <region><subnet>10.1.2.0/24</subnet></region>
  </DeliveryCriteria>
  <DeliveryRules>
    <allow>>false</allow>
  </DeliveryRules>
</ContentDelivery>
<MetadataScope>
  <host>origin.example.com</host>
  <resource>*/movies/*</resource>
</MetadataScope>
</CDNIMetadata>
```