

CDNI Control Interface / Triggers - 2nd Edition

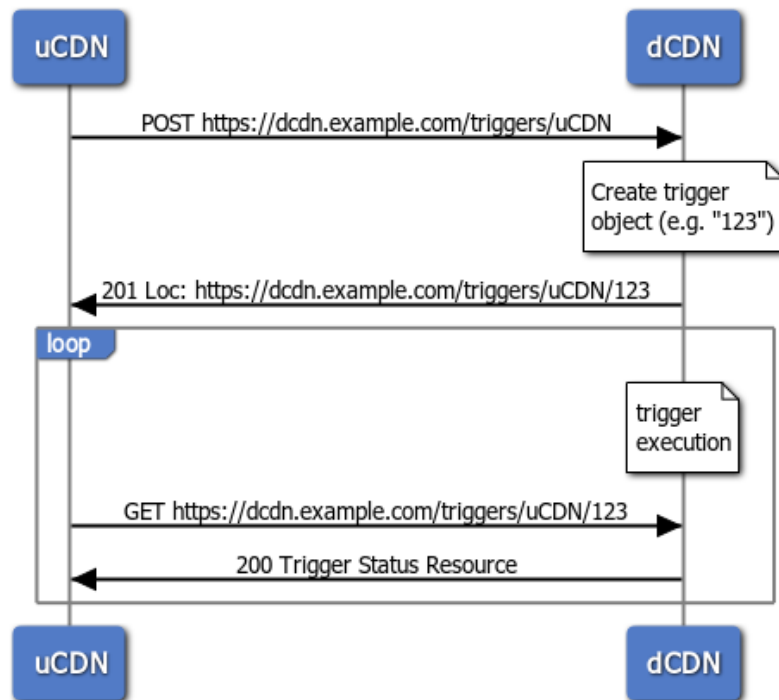
*Sanjay Mishra, Nir B. Sopher,
July 2023*

Agenda - Towards WG Last Call

- A Quick Reminder
- 3 additive revisions of draft-ietf-cdni-ci-triggers-rfc8007bis:
 - 06: An overall coherency check & alignment
 - 07: Splitting the “Trigger” and “Cancel” commands objects
 - 08: Resource path based “Cancel” command
- Discussion
 - Q&A
 - Selection of the draft for Working Group Last Call.
 - WG Last Call

Reminder - RFC 8007: CDNI Control Interface / Triggers

- Content/Metadata management
 - Preposition
 - Invalidation
 - Purge



Reminder - CDNI Control Interface / Triggers 2nd Edition

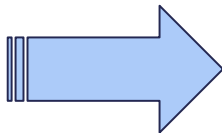
- Main Modifications (Rev v04 of the draft)
 - New Trigger Object structure
 - Flexibility
 - Extendability
 - Cascaded CDNs Error Propagation
- No change in actual protocol

Reminder - New Trigger.v2 Object Properties

- Type (e.g. preposition)

- metadata.urls
- content.urls
- content.ccid
- metadata.patterns
- content.patterns
- content.regexes
- content.playlists

- cdn-path



- Action

“What”:
What to do (e.g.
preposition)

- Trigger Specs

“Whom”:
Targets to be
executed on

- Trigger Extensions

- cdn-path

“How”:
Execution special
instructions

Reminder: trigger type → trigger action

- The “What”
 - Preposition
 - Invalidation
 - Purge
 - Future...

Reminder - Generic “Spec” Object

- The “Whom”
 - Specify targets to execute the trigger on
 - Generic “spec” defining the selection methods
 - urls / ccids / UriPatterns / UrlRegexes / ContentPlaylists
 - Future ...
 - Apply to a specified Trigger-Subject
 - Metadata, Content, Future ...
 - dCDN to advertise via FCI supported scopes (<action, subject, specs, extensions> tuples)

Generic “Extension” Object

- The “How”
 - Add instructions for finer control over the trigger execution
 - Generic - flexible and extendable
 - LocationPolicy, TimePolicy, Future ...

Status.v2 / Error.v2 Object

- Aligned to hold a “Trigger.v2” internal object

So Far v04 Recap

draft-ietf-cdni-ci-triggers-rfc8007bis-06

- An overall coherency check & alignment
- Eliminating loose ends
- Request new IANA Registries
 - "CDNI CI/T Trigger Specs"
 - "CDNI CI/T Trigger Subjects"
 - "CDNI CI/T Trigger Extensions"
- **NOTE**
 - **NO** "CDNI CI/T Trigger Actions" IANA Registry.
Keep using "CDNI CI/T Trigger Types" from RFC 8007

Generic “Spec” Object - Changes

- **NEW @DRAFT (v06 vs. v04)**
 - Designated IANA Registries
 - "CDNI CI/T Trigger Specs"
 - "CDNI CI/T Trigger Subjects"
 - New Error Codes
 - espec
Indicating the trigger includes an unsupported trigger spec, or a failure while parsing a trigger spec
 - esubject
Indicating the trigger includes an unsupported subjects

Generic “Extension” Object - Changes

- **NEW @DRAFT (v06 vs. v04):**

An IANA Registry was added to list the extensions:
"CDNI CI/T Trigger Extensions"

Status.v2 Object - Changes

- **New @Draft (v06 vs. v04):**
 - Status object “status reason” property:
 - Human readable
 - non-mandatory
 - E.g. “pending due to time-policy extension”

Versions Clarification

NEW @DRAFT (v06 vs. v04)

- CI/T 2nd edition preserves the RFC 8007 protocol structure
⇒ Not versioning of the APIs, but versioning of the objects
- **All interface changes are reflected through the usage of “v2” high level objects** (that include a trigger.v2 object)
 - ci-trigger-command.v2
 - ci-trigger-status.v2
- Properties names do not include the “v2” suffix

FCI [Capability Object](#): “[CI/T Objects Versions](#)” (section 9.1)

Versioned Objects

NEW @DRAFT (v06 vs. v04)

- Versioning only Part of the High Level/MIME Objects
- Versioned objects can now be paired by version
 - Trigger creation “command” version implies the monitored “status” resource version
 - **ci-trigger-command.v2** ⇒ **ci-trigger-status.v2**
 - **ci-trigger-command** ⇒ **ci-trigger-status**
 - Etc. (future...)
- Objects that are not dependant on versioning:
 - **ci-trigger-collection** -
 - may list paths to trigger status resources of different versions

draft-ietf-cdni-ci-triggers-rfc8007bis-07

- **NEW @DRAFT (v07 vs. v06)**
 - Splitting the “Trigger” and “Cancel” commands objects

The Command Object

- RFC 8007 single ci-trigger-command Object
 - POSTed on the trigger collection path
 - Properties Mixture:

Property	Data	Used For
trigger	trigger properties	trigger creation
cancel	List of existing triggers status resources paths	triggers cancellation
cdn-path	list of CDN PIDs	loop detection/avoidance

Trigger Creation Command

NEW @DRAFT (v07 vs. v06)

- Object `ci-trigger-command.trigger.v2`:
 - Used for creating a “v2” trigger
 - ⇒ Matching a `ci-trigger-status.v2` object
 - I.e. this is a version specific object
 - POSTed on the trigger collection path
 - E.g. <https://dcdn.example.com/triggers/uCDN-A>

Property	Data	Used For
trigger	trigger.v2 properties	trigger creation
cdn-path	list of CDN PIDs	loop detection/avoidance

Trigger Cancellation Command

NEW @DRAFT (v07 vs. v06)

- Object ci-trigger-command.cancel:
 - Used for canceling a trigger
 - Not version specific - cancel trigger of any version
 - POSTed on the trigger collection path

Property	Data	Used For
cancel	List of existing triggers status resources paths	triggers cancellation

- **TO DISCUSS:** Is “cdn-path” needed?
The trigger to be cancel already exists and was checked for loop

draft-ietf-cdni-ci-triggers-rfc8007bis-08

- **NEW @DRAFT (v08 vs v07)**
 - Resource path based “Cancel” command

Trigger Cancellation - Standardization

New @DRAFT (v08 vs. v07)

- Object ci-trigger-command.cancel:
 - Canceling a trigger of any version
 - **POSTed on the specific trigger resource path**
E.g. <https://dcdn.example.com/triggers/uCDN-A/123>
 - Object has no properties
 - **TO DISCUSS:**
 - More standard
 - No bulk trigger cancellation
 - Is it even needed?
 - Moving the responsibility dCDN ↔ uCDN

OK. So?

- Questions?
- Selection of a draft (v06, v07 or v08) for Working Group Last Call.
- WG Last Call