



# SVA Capacity Insights Interface

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IETF/CDNi Metadata Model  
Extensions

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# Capacity Insights Interface: Mission

- Provide an interface which is meant to allow Content Providers, Service Providers, and CDNs to exchange information to facilitate an integrated and informed end-to-end traffic steering workflow with the goal of keeping performance KPIs at acceptable levels.
- Identify areas where the existing IETF CDNi FCI and Metadata models and interfaces may be useful and where practical needs may dictate alternate solutions and formats.

# Capacity Insights Interface: Goals

- ❖ Provide framework for information exchange to facilitate traffic delegation decisions.
- ❖ Provide limits that are scoped to a CDNi footprint.
- ❖ Provide limits that are scoped to a host.
- ❖ Provide limits that are specific to the delegation relationship.
- ❖ Define limits in unambiguous, mutually understood terms.
- ❖ Support the following communication workflows:
  - ❖ Bootstrap
  - ❖ uCDN to dCDN continuous polling
  - ❖ dCDN to uCDN incremental updates
  - ❖ uCDN to dCDN update solicitation

# CDNi FCI: CapacityLimit

We intend to treat the concept of a Capacity Limit as an FCI Capability.

- a Capacity Limit defines the limit of traffic delegation from a uCDN to a dCDN.
- Scope of limit follows CDNi footprint guidelines, as well as additional host scoping
- Limit is specific to uCDN to dCDN delegation relationship. The limit does not represent an advertisement of total dCDN capacity.
- We propose to Extend FCI with a new payload: FCI.CapacityLimits.

# CDNi FCI: Telemetry

Capacity Limits will be associated with a corresponding Telemetry source

- The meaning of a Limit becomes well defined by a corresponding source of data providing current utilization.
- Telemetry source will share the same scoping as the Capacity Limit.
- The Telemetry sources will be advertised as an FCI Capability as such we propose to extend FCI with a new payload FCI.Telemetry.
- Initially a generic definition of Telemetry will be used, with the intent that a formalized Telemetry definition will be established at a later date.

# CDNi MI: RequestedCapacityLimits

A Metadata object which will allow the uCDN to request Limit changes from a dCDN

- will be scoped to a footprint referenced by an existing Capacity Limit.
- intended to allow uCDNs to request that the dCDN reevaluate a current CapacityLimit with the values specified in the RequestedCapacityLimits object.
- RequestedCapacityLimits will be processed asynchronously by the dCDN.
- Updates to CapacityLimits that are triggered by a RequestedCapacityLimits signal will be handled in the same manner as any other FCI Capability update.

# High level CapacityLimit Workflow

