

BoF CDNi

draft-bertrand-cdni-use-cases-01

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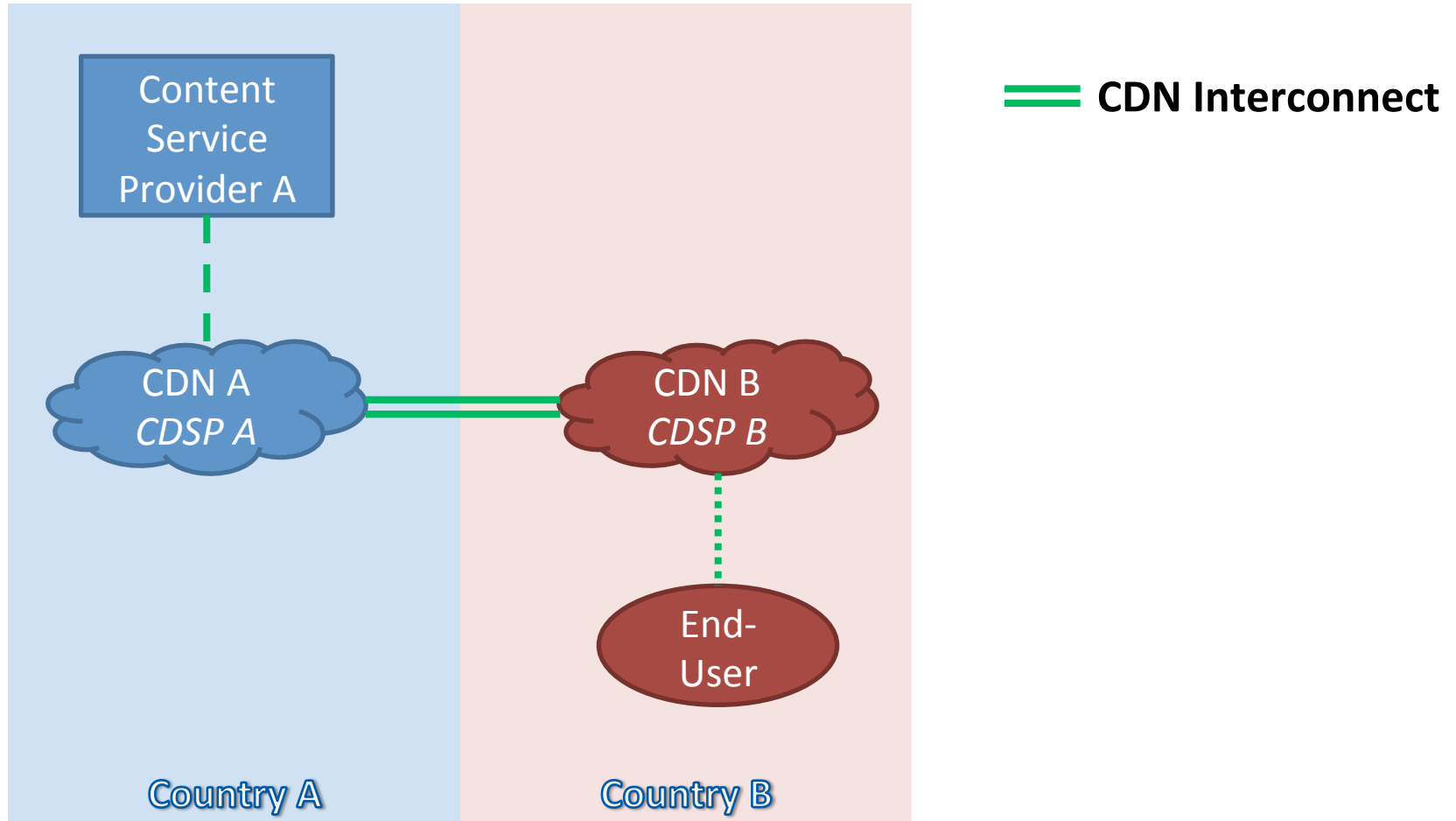
Draft Overview

- Merges input from [I-D.watson-cdni-use-cases] and [I-D.bertrand-cdni-use-cases]
- This document outlines **real world use-cases** for interconnecting CDNs.
- It does not discuss technical solutions.
- These use cases:
 - Enable checking that CDNI requirements match real needs.
 - Show the usefulness of work on CDNI enablers in the IETF.

Footprint Extension Use Cases

- **Geographic Extension**
 - Provide services beyond one's own footprint by relying on other CDNs (same country or different countries)
 - *Example: FT and an over-the-top CDN may interconnect their CDNs*
- **Region to Region Interconnection**
 - Allow CDN service providers with several CDNs in several regions to provide consistent service
 - *Example: FT and TP (Orange group) may interconnect their CDNs*
- **Nomadic Users**
 - Allow users who move to other geographic regions to continue to access their content
- **Content distribution restrictions (Geo-blocking):**
 - Exchange through the CDN interconnection of information for controlling the footprint of the delivery is important

Geographic Extension: an Example



Offload Use Cases

- **Overload Handling and Dimensioning**
 - A CDN may interconnect with another CDN to increase its effective peak capacity.
 - *Example: CDN1 supports a special event, during the peak traffic it offloads requests to CDN2*
- **Resiliency**
 - In partial failure scenarios, a CDN service provider (CDSP) could redirect some requests toward another CDN.

CDN Capability Use Cases

- **CDN with different features**
 - Support the delivery of content to alternative end-devices
 - *Example: a CDN does not support specific features for mobile devices, it delegates some request to another one that support mobiles.*
- **Vendor Interoperability**
 - A CDN service provider may wish to operate a multi-vendor strategy for its CDN.
- **Proximity improvement**
 - CDN service providers (*e.g.*, Over-the-top) may work with ISPs to use ISP's surrogates deployed closer to the end-users.

Use Cases Application

- The use cases apply:
 - Within a single CDN service provider
 - Between ISP's CDNs
 - Between ISP's and OTT's CDN
 - Between OTT's CDNs
 - ...

Conclusion / Next Steps

- The I-D lists **several real-world use cases for CDNI**
- **These use-cases are highly desirable but deploying CDN interconnection is not feasible today:**
 - See [draft-bertrand-cdni-experiments-00]
- Next steps:
 - Integrate feedback from IETF community
 - Merge with Kevin J. Ma's use-cases draft