DECADE Requirements

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Outline

- Summary of Changes
- Open Issues
Change Summary (1 of 2)

- Made the draft P2P-agnostic
  
  - *Target Application* definition indicates the properties of applications that DECADE intends to support
    
    - Application with explicit control on the storage and network resources used to deliver content to a large number of users / end-hosts
    
    - Large content divided into smaller blocks for flexible distribution
    
    - Distributed content immutable
  
  - No more “peer” or “P2P” used in normative text

- Removed “Application-independent API” requirement

- MUST specify at least one mandatory data protocol
  
  - Motivation: provide at least a basic mode of operation
Change Summary (2 of 2)

- New requirements
  - DECADE SHOULD support redirection to another DECADE server
  - DECADE MAY support client-supplied hints on stored data
    - Example: P2P live-streaming app may not need data persisted to disk
    - May make use of underlying mechanism (there's a proposal for this in NFS); this is a storage requirement

- Updated requirements
  - Object deletion request MAY have an overwrite flag
    - Utility depends on naming scheme, but that's an architecture discussion
  - Status information from DECADE server also includes:
    - Resource usage, quotas, permissions
    - This includes operations by others which were authorized by a client
Open Issues (1)

- Target Applications for DECADE

- Do you agree with definition of Target Application?
  - Is it clear enough?
  - Is it sufficiently narrow?
    - If not, what properties should be removed?
  - Does it capture the desired use cases?
    - If not, what properties should be added?

- NOTE: We do not wish to name “classes” of applications
  - The lines can be blurry, and they can evolve
Open Issues (2)

- Should properties of a naming scheme be added to requirements?
  - Examples:
    - DECADE name MUST be known to the client before it is stored
    - DECADE name MUST NOT require creation of a new registry
Open Issues (3)

- Which status information should be available to DECADE clients?
  - Some comments on mailing list indicated a desire to get server status information (e.g., load)
  - Current draft takes the approach of only providing status for a client's own usage (and usage that it explicitly authorized)

- Possible benefits of status information
  - Easier to determine an appropriate DECADE server (*not in charter!*)
  - This might be satisfied in other ways
    - DNS load balancing, or explicitly via ALTO

- Downsides to server status information
  - Not well-defined (what does load mean? Some metrics may be implementation-specific)
  - Security risk if openly accessible (“I'm already loaded; flood me first!”)
Items to be Addressed

- Requirements of a discovery mechanism
  - No, we will not create a new one if at all possible