

# The Application of the Path Computation Element Architecture to the Determination of a Sequence of Domains in MPLS & GMPLS

draft-ietf-pce-hierarchy-fwk-00.txt

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# Hierarchical PCE (Recap)

- The Parent PCE maintains a topology map
  - The nodes are the Child domains
  - The map contains the inter-domain links
  - The TE capabilities of the links are also known
- Parent PCE knows the identify and location of the child PCEs responsible for the Child domains
  - Statically configured
- Domain confidentiality
  - A Parent PCE is aware of the topology and connections between domains, but is not aware of the contents of the domains
  - Child domains are completely confidential
    - One child cannot know the topology of another Child.
    - Child domains do not know the general domain mesh connectivity

# Applicability

- Inter-domain Path Computation
  - When the Domain Path is Not Known
- ASON architecture (G-7715-2)
  - H-PCE mechanism fits well within the ASON routing architecture
    - Multiple Routing Areas
    - Multi-level
- IGP Areas
  - Path computation across multi-area networks consisting of a backbone area and various peripheral areas
- Inter-layer
  - IP over Optical

# Current Status / Next Steps

- Relatively stable
  - Thorough reviews always welcome.
- Solution draft now exists
  - draft-zhang-pce-hierarchy-extensions
  - Open Issues
    - Parent PCE TED Management
    - Domain Representation
    - Reachability
    - OF Codes
- Next Steps
  - Await resolution of relevant open issues in the solution document.
  - Add “Use Cases”.
  - Look to develop a scalability analysis.