Glue schema

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What is GLUE?

- *Grid Laboratory Universal Environment*
- http://www.hicb.org/glue/GLUE-v0.1.doc
- Focuses on interoperability between US and European Grid project
- In general: Make grids work together
  - Glue Schema: enable Grids talk to each other (phase I)
- Other areas:
  - Authentication (Phase I)
  - Data movement (Phase II)
 - Authorization (Phase II)

GLUE schema

- Define a common schema for resource publishing
  - ComputingElement (CE): almost ready
  - StorageElement (SE): started
  - NetworkElement (NE): September?
- The CE schema is almost ready after 2 months (~15 phone confs).
- Storage related CE attributes (for instance MinLocalDiskSpace, CloseSE) will be defined later (when SE schema is better understood)

CE schema discussions

- Initial problem
  - Globus (Carl K, Jenny S, …) view: homogenous resources with fine-grained and unambiguous resource attributes
  - EDG (Massimo, myself, German, …) view: heterogeneous resources with coarse-grained and sometime ambiguous (e.g. FreeCPUs) attributes

Compromise

- Introduction of Cluster and SubCluster
  - Cluster: a container that groups together SubClusters, or nodes.
  - SubCluster: a "homogeneous" collection of nodes, where the homogeneity is defined by a collection whose required node attributes all have the same value. For instance: a SubCluster represents a set of nodes with same CPU, memory, OS, network interface, etc.
- Several GLUE attributes can be located at different levels of the hierarchy depending on their homogeneity properties
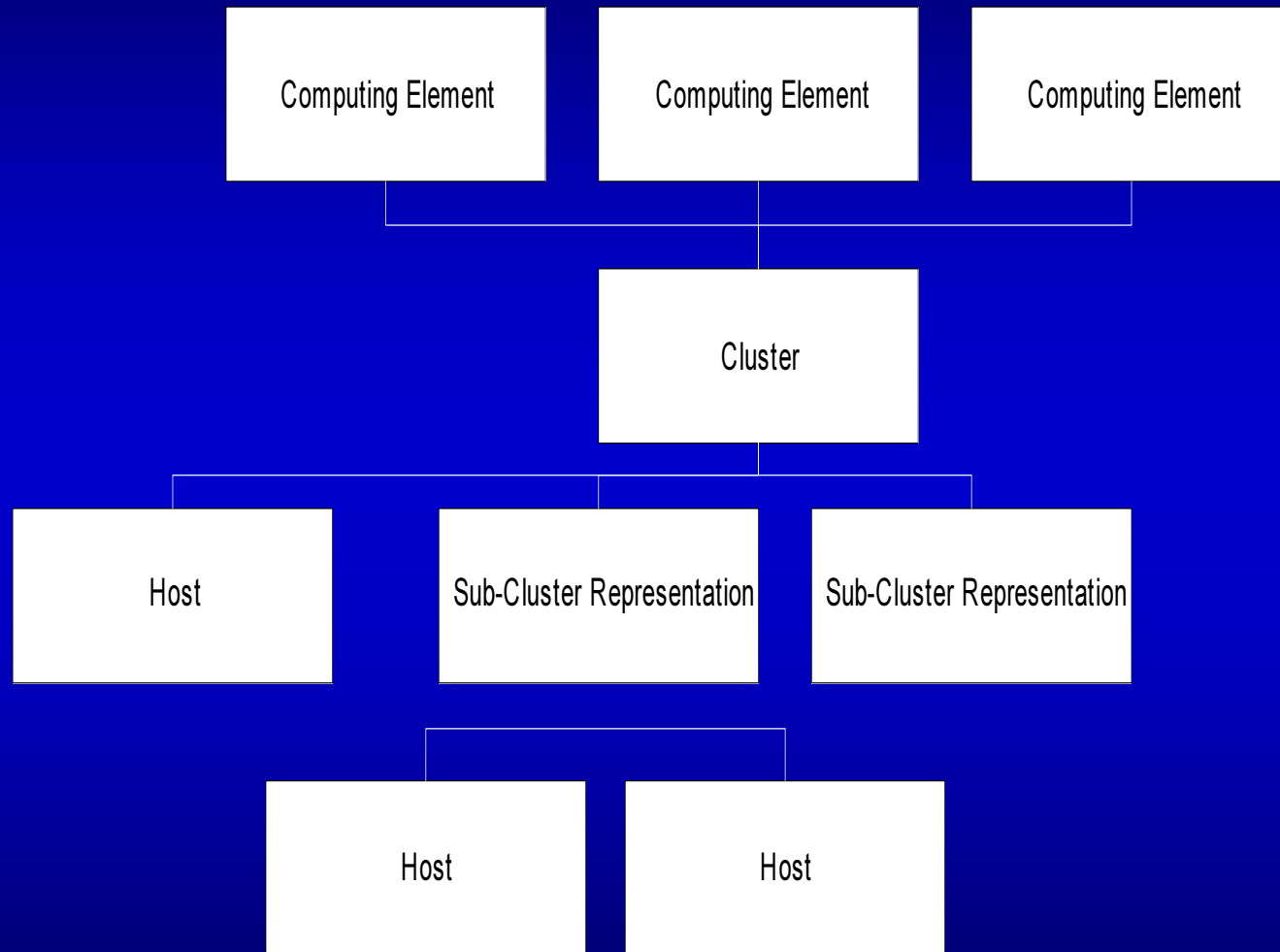
Implementation

- Mid June: Globus MDS implementation of the information providers
  - Prototype developed at SDSC (I think..): using Ganglia cluster monitoring from Berkeley (see http://ganglia.sourceforge.net/) for cluster and subcluster objects. Normal Globus info providers for host objects
- EDG implementation foreseen for R1.4 (end July)
  - WP4 RMS task will develop the info providers
  - WP1 will change the resource broker
- Develop/deploy on DataTag testbed?