



HALCYON SYSTEMS, INC.

Data Management as a Cluster Middleware Centerpiece

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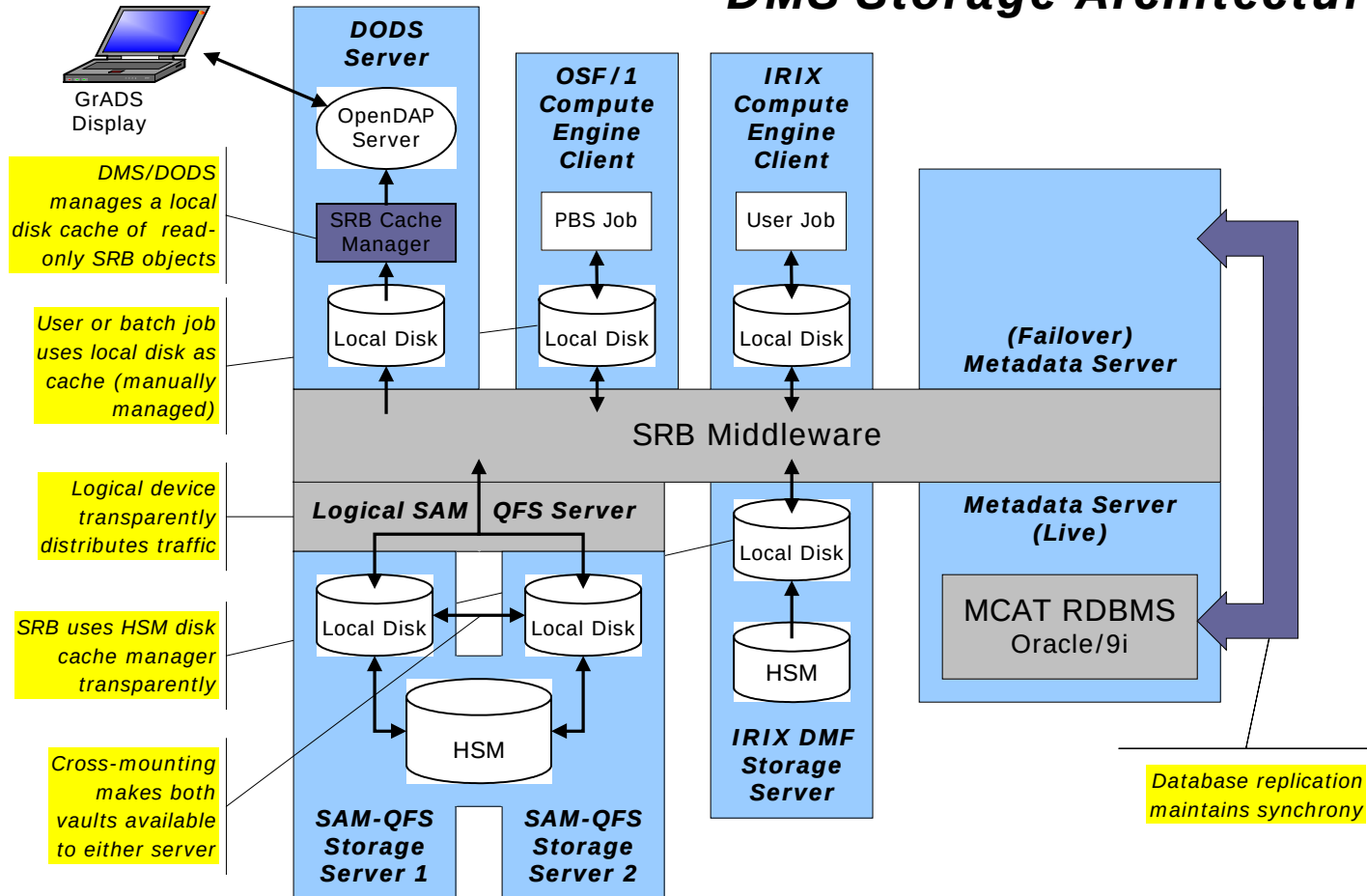
DMS: What we needed

- Single image mass storage
- Uniform Metadata
- Accounting and dataset aging
- Web distribution/publication
- Eliminate multiple dataset copies
- Cache management
- Connection to visualization tools
- Transparent migration of dated HSMs

DMS: Integrated Components

- SRB
- DOLMS
- GrADS
- Global Change Master Directory Structure
- Halcyon Toolkit
- Configuration Management Tools
- Migration scripts using SRB components
- Grid Security Infrastructure

DMS Storage Architecture



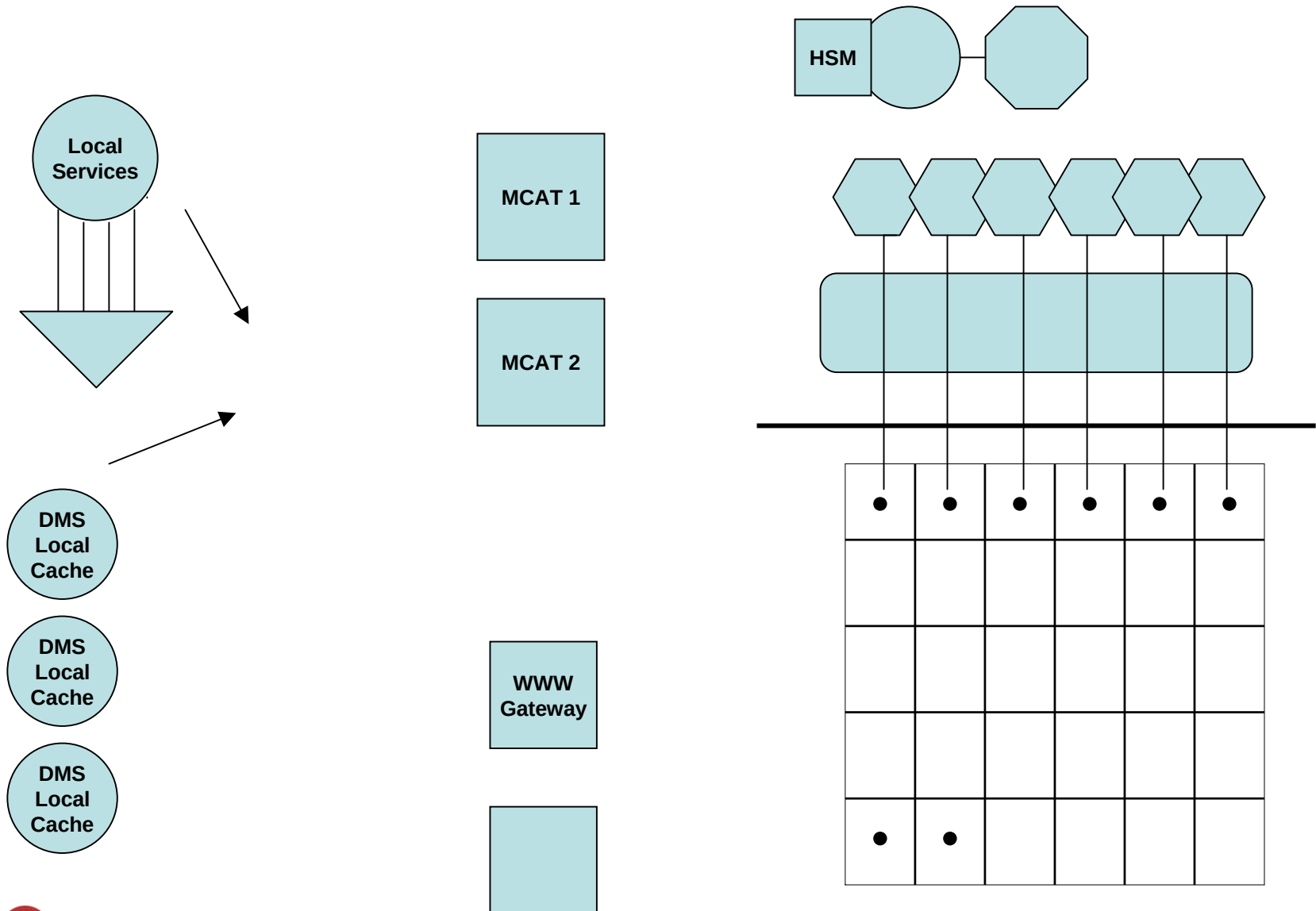
Naïve Grid Description

- Large nodes (centers)
- Small Groups
- Isolated users
- External users
- External public (non computational)
- Uniform systems engineering

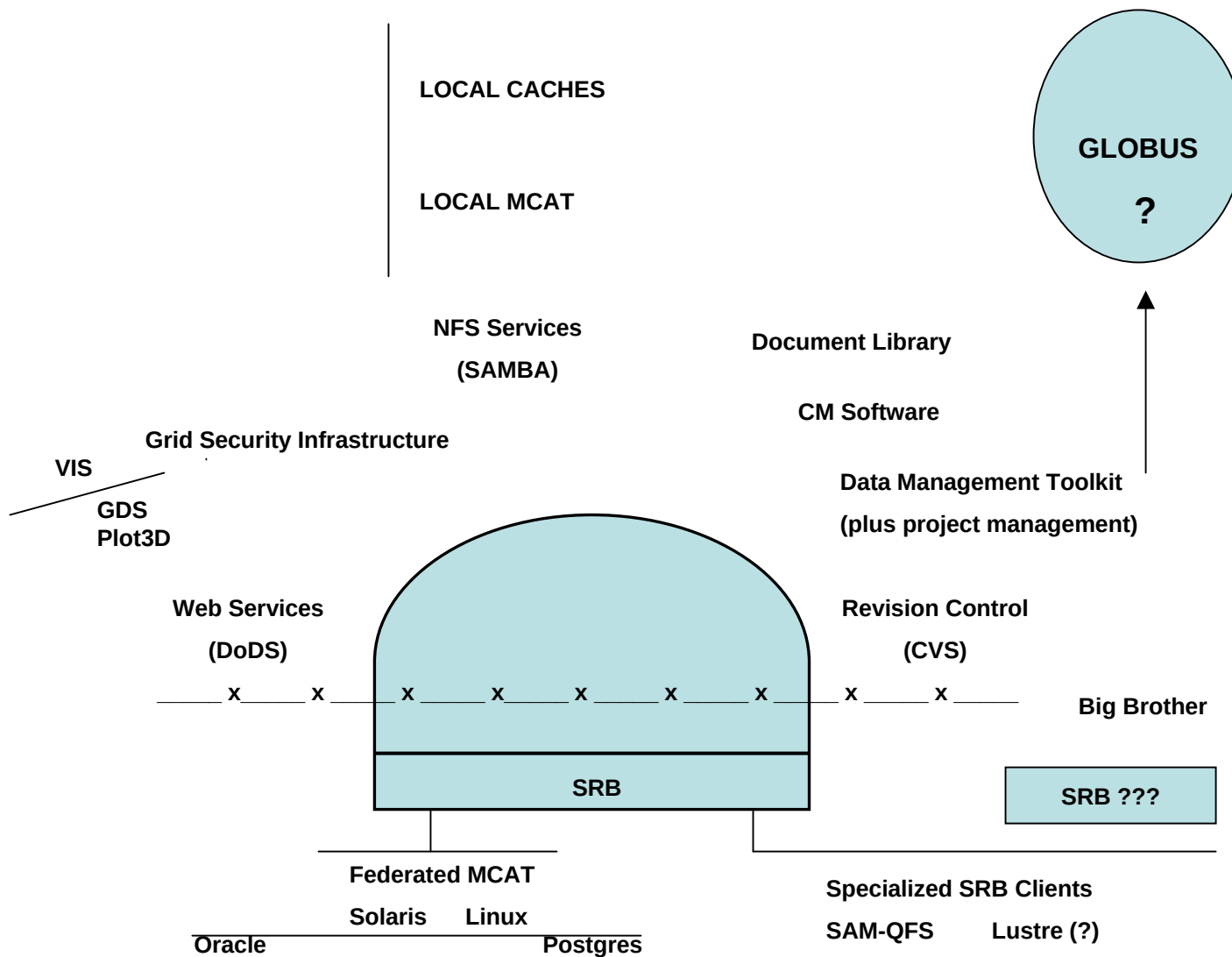
Naïve Cluster Description

- Computing nodes
- I/O Nodes
- Mass Storage engine(s)
- Queuing
- Administration “engines”
- Intra-cluster and external networks

Future Grid Architecture



Local Services: Infohedron



DMS: Grid Glue-ware

- Large nodes converted to DMS
- Smaller groups supported by Inhedron type local engines
- External users supported by SRB/Web clients
- External “public” supported via Web
- Systems Engineering distributed via DMS package

Infohedron: GMAO

- Grads Server (Specialized DOLMS Client)
- Project Management Console
- Enhanced Document Library
- Samba server
- Provide efficient local cache and connection to DOLMS
- Note on DMF migration