

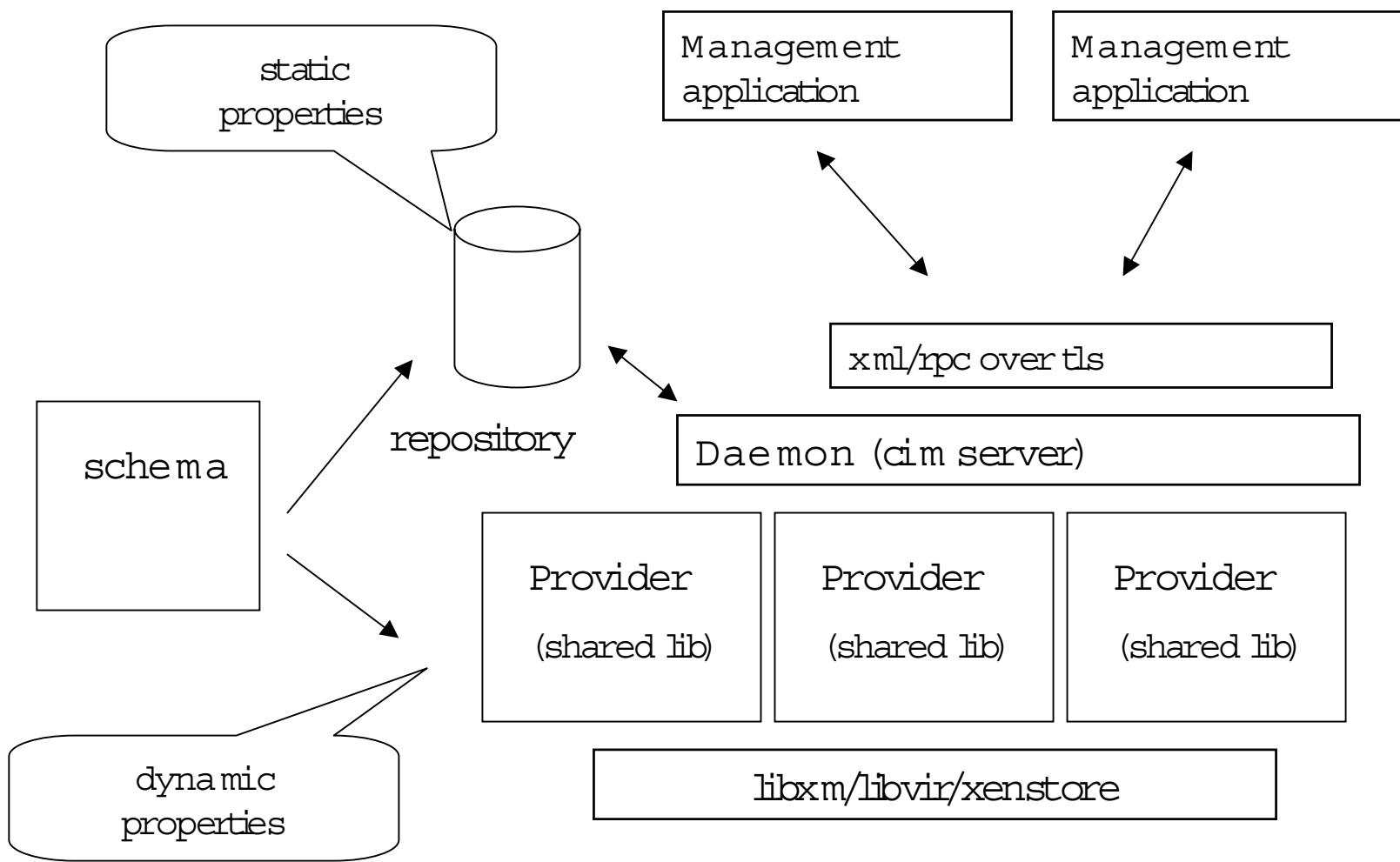
# Xen Management Interfaces using DMTF CIM Technology

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# CIM Technology Overview

- What is CIM Technology?
  - Schema Description Language
    - Object semantics
    - Inheritance of schema elements
    - Methods and Properties
  - Standardized Schemas
    - Normalized descriptions of computer systems, operating systems, applications, adaptors, devices, networks, etc.
  - Processing Model
    - CIM Server: a daemon that provides network access to schema instances
    - Provider: a shared library that instantiates schema instances
  - Network Protocol
    - XML-RPC/TLS



# Pros/Cons of CIM Technology

- Excellent Abstraction Layer
  - Protect apps from changes in lower-level interfaces
- Good interoperability characteristics
  - Well supported protocol
- Extensible
  - Object semantics, inheritances
- Flexible licensing
  - Providers are shared libs
- Industry momentum
- Open-source CIM Servers
  - Pegasus
  - OpenWbem
- Complicated Models
  - Standard Schemas too cluttered
- Relations (connection classes) make for inefficient implementation
- Never the simplest option
  - Implementation
  - Model
- DMTF politics

# Standard Virtualization Schema

- DMTF Workgroup is standardizing virtualization schema
  - Hypervisors
  - Partitions (domains)
  - Storage virtualization
  - Virtualization Control Points (dom0)
- Novell, VMWare, IBM, Unisys, many others
- Projected standardization eoy 2006

# Xen CIM Development

- Novell
- IBM
- Unisys
- Xensource
- Others?

# Proposal

- Move provider development into open
- Incorporate into Xen project
- Host on xenbits
- Contribute existing providers