Web / Data Portal Architecture

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Definitions

- Web Portal

  - *A web site that acts as a starting point or gateway to Internet content, services, and information. Portals expose this information via a consistent set of visual elements and organizational constructs that improve the user experience and may relate, unify, or otherwise enhance the content.*
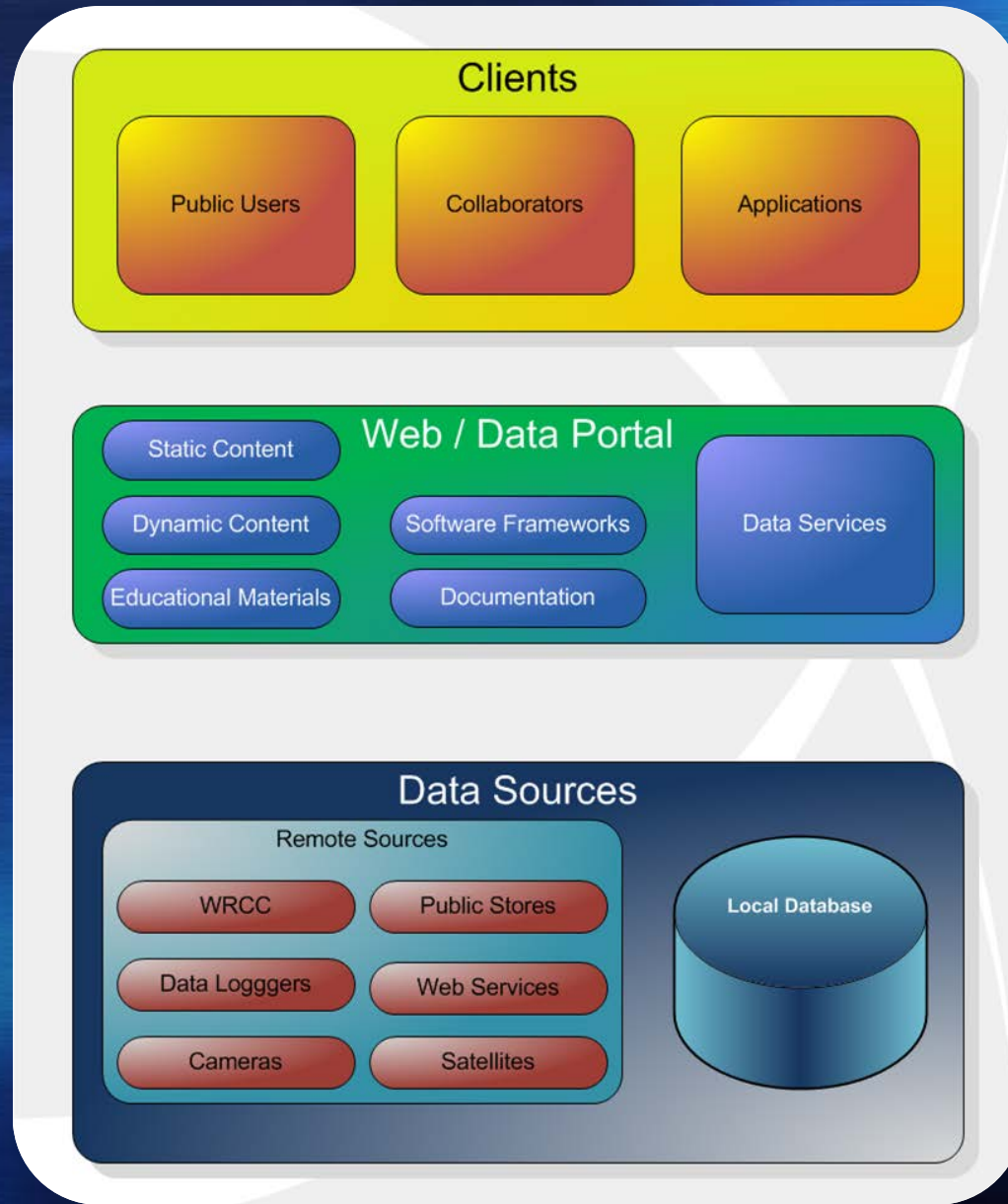
- Data Portal

  - *A web site that acts as a starting point or gateway to Internet content, web/data services, and related information. Portals expose this information via a consistent set of visual elements and organizational constructs that improve the user experience and relate, unify, and otherwise enhance the content. Data portals focus on providing centralized, robust access to specific data and supported manipulations.*

Web Portal Characteristics

- Content
  - Dynamic
  - Static
- Unification / consolidation
- Automation
- Secure exposure
- Data services
  - Selection
  - Manipulation
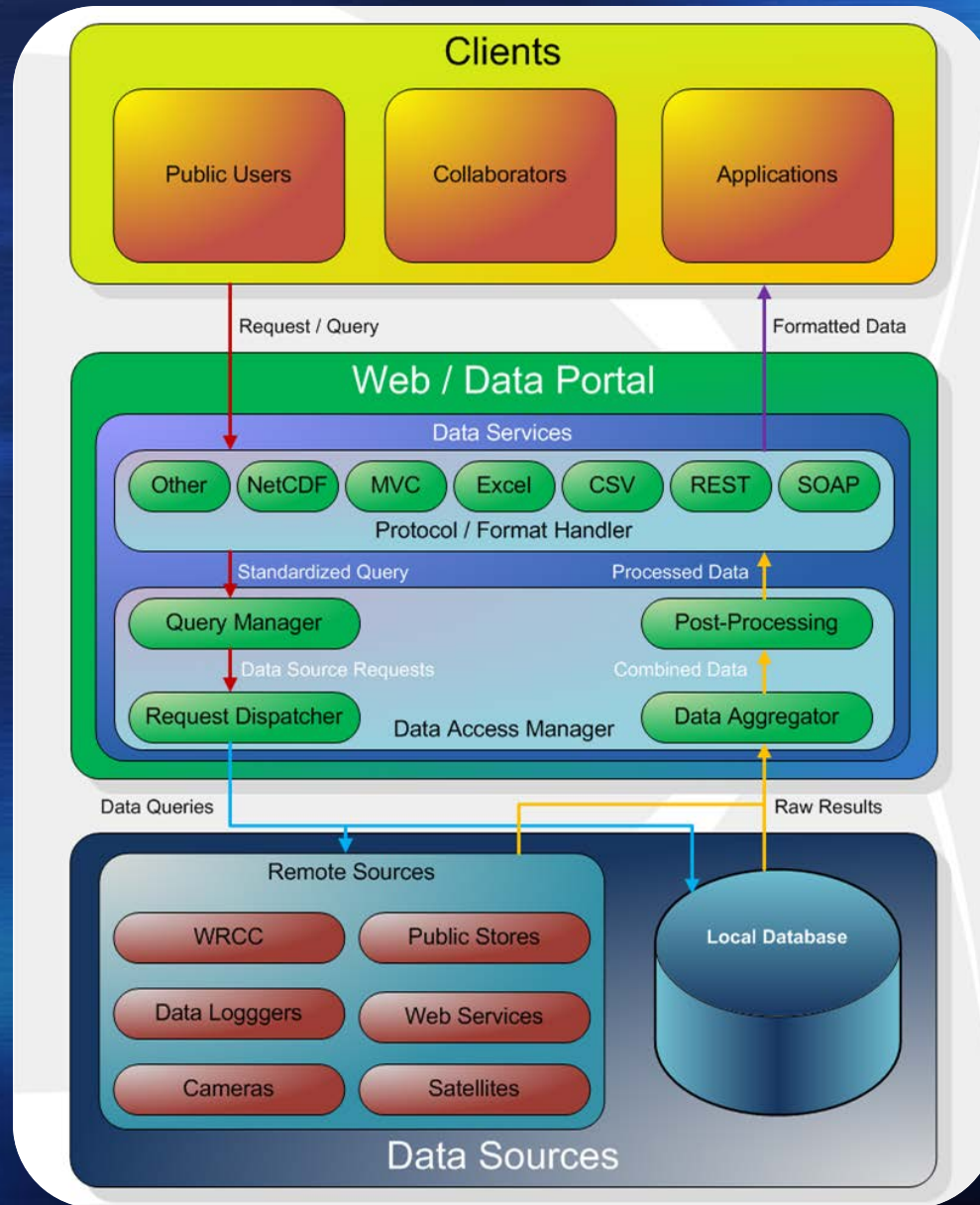 - Transformation
  - Acquisition
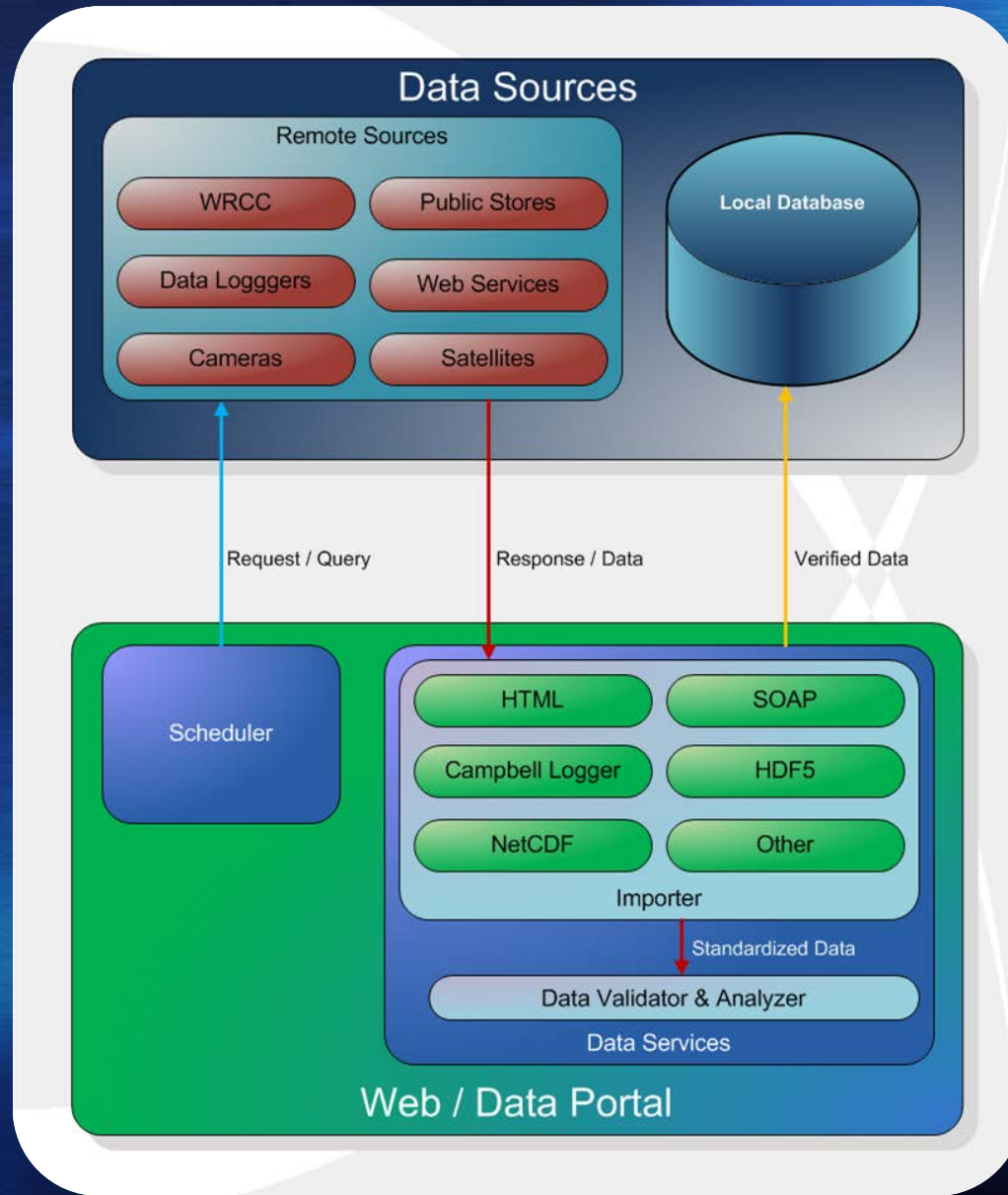
General Architecture

Architecture Tiers

- Client
  - Consumes or accesses information
- Web / Data Portal
  - Provides access to information
  - Provides various features
- Data Sources (back-end)
  - Persistent storage
  - Includes various sources
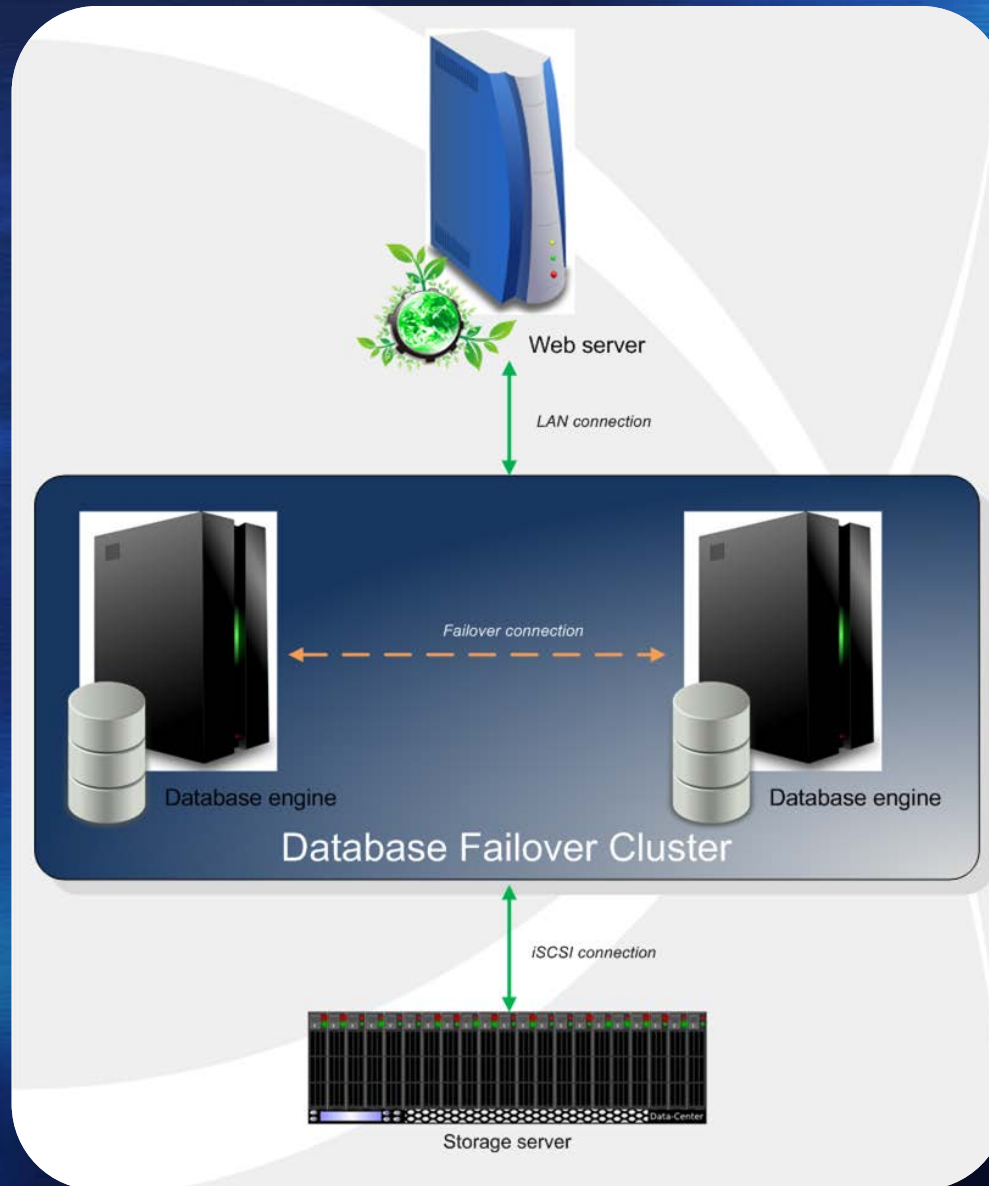
General Client Data Access

General Data Acquisition

Logical Components

- Scheduler
- Data services
  - Importer
  - Exporter
  - Validation
  - Manager
- Data stores
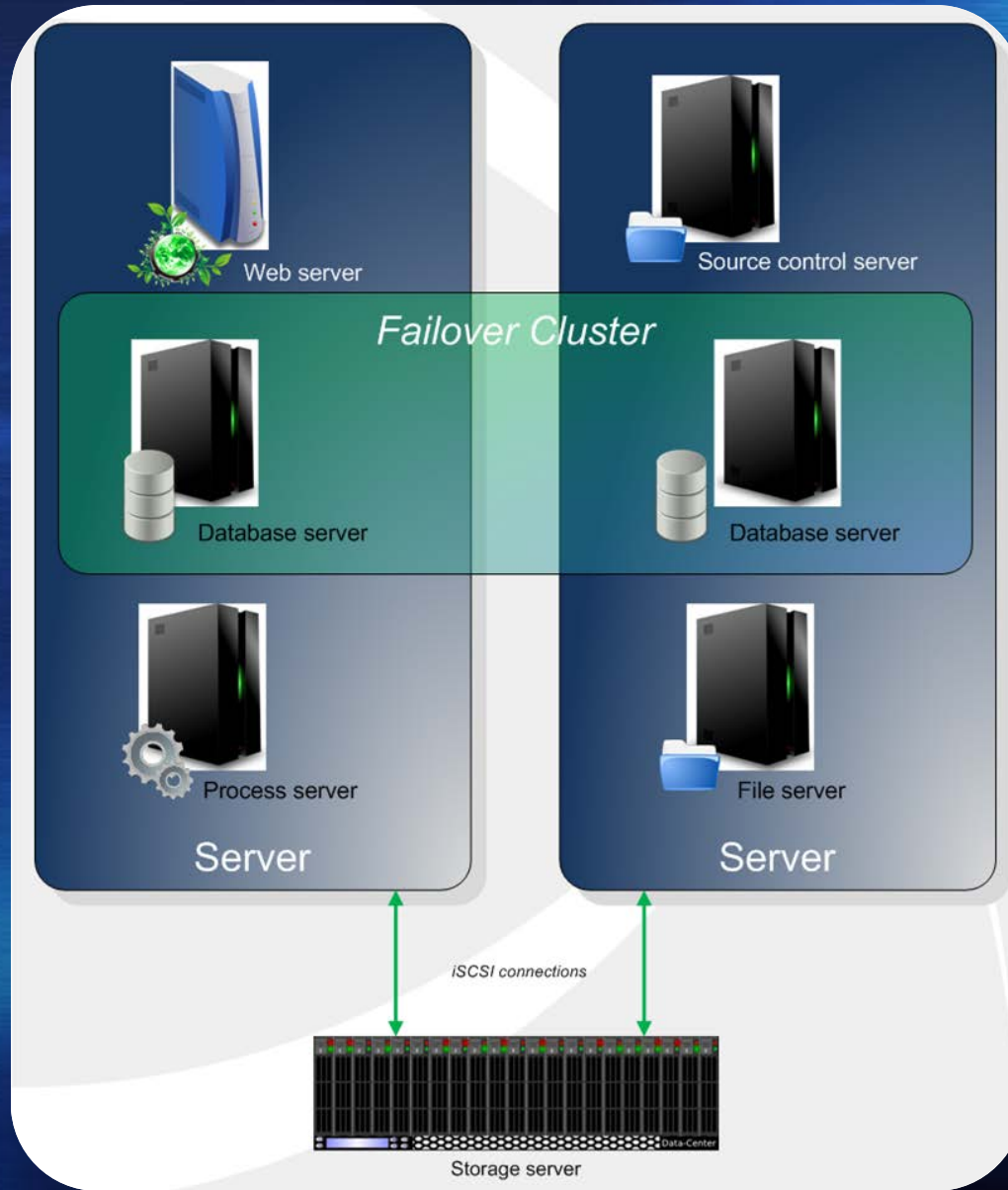 - Database
  - Service
  - File

Logical Server Architecture

Physical Implementation

- Plan for redundancy
    - Failover clusters
- Optimize hardware utilization
    - Virtualization
- Ease upgrades
    - Virtualization resource allocation
    - Easy transfer to new hardware
- Fast recovery
    - Restoration of virtual machines
- Isolation of components

Physical Server Architecture

Software Selection

- Database
  - Microsoft SQL 2008 Enterprise Edition
- Web development
  - ASP.NET 3.5 or above
- Operating systems
  - Windows Server 2008
    - Datacenter Edition
    - Web Server
    - Enterprise