ACADEMA Server – Product Overview

Kernel
- Java and OSGI, works on various operating systems and machine architectures (Unix, Windows, 64 bit fully supported)
- Several applications/servers and OSGI runtimes with multiple simultaneous versions may run in single kernel
- Installs as system service with health monitoring and remote management
- Clustering / distributed system support with automatic discovery and fail-over

Data modeling
Application data can be modeled in various ways:
- GIS (ISO TC/211)
  - Spatial schema, including topology (ISO 19107)
- Coordinate reference systems and positioning (ISO 19111)
- Feature model (ISO 19109) and GML (ISO 19111)
- Grid coverage (ISO 19123)
- UML/MOF
- XML schema
- Semantic web ontology (OWL, RDF schema)

Business rules
Data model may be constrained through object constraint language (OCL) and various rule systems

Mapping of data model to data sources
Data models may be mapped to various relational/spatial databases and files
- Oracle/Oracle Spatial
- Postgres/PostGIS
- Other relational databases
- ESRI Shapefile
- XML and GML
- RDF

Grid coverage (raster data)
- Various raster formats (PNG, JPEG, TIFF, ECW, ...)
- Elevation data (DEM)
Document repository

- Team-oriented, multi-user with access locking for concurrent editing
- Documents are stored in hierarchical structure - spaces. Authorization data and other properties of space propagate to nested/child spaces
- Extensible schema and meta data (aspects)
- Document editing according to their type
- Document classification
- Rule-based content processing
- Full text index and search

Authorization and data security model

User-role based system, with authorization data stored in database, files, LDAP or Microsoft Active Directory™ secures access to:
- web applications
- data (GIS is multi-user, each user has its own presentation of the data)
- document repository

Data access

Once modelled, data may be accessed and modified through:
- General object editor application for data model and instance data which supports detached data editing
- Web application components for map display, GPS navigation and data editing (forms)
- Spatial web services (WMS, WFS, WCS, ...)
- Tabular data web service
- Custom XML documents

There are various built-in data presentation options
- Raster, PDF, SVG output for map graphics
- Excel output for attribute data

Document repository can be accessed through web interface, network shares (CIFS), WebDAV and FTP

More data editing, presentation and processing options can be dynamically added by end user through integrated XML presentation and processing framework (Cocoon)