



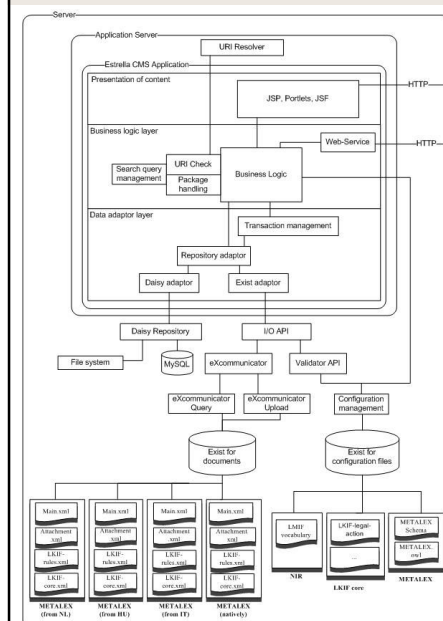
Reference Open Source Legal CMS

Architectural overview

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Logical Architecture



Model-view-controller architecture:

- Presentation layer
- Business logic layer
- Data adaptor layer

Components:

- JBoss application server
- eXist native xml DBMS:
 - separate DB for documents
 - separate DB for configuration files
- Daisy Repository
- MySQL DBMS



Repositories

Daisy

- **Benefits:**
 - Document Storage
 - Versioning
 - SQL like query language

eXist

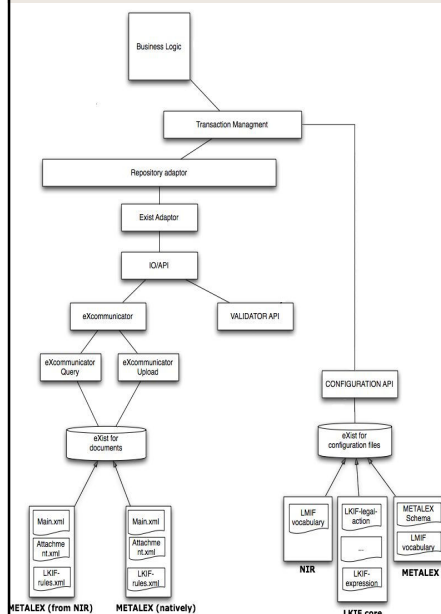
- **Benefits:**
 - Use of XML operations
 - Search functions can be more complex

- **Difficulties:**
 - Storing documents in multiple places
 - Maintain consistency
 - Transaction management

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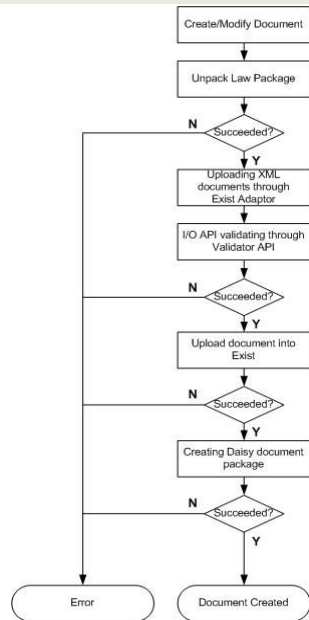
eXist module



- **IOAPI:**
Common interface of the whole eXist specific module
- **Validator API:**
Syntactic and semantic validation of uploaded documents
- **eXCommunicator:**
Low level adapter for eXist DBMS
- **Configuration API:**
Retrieves configuration files (schemas, vocabularies)
- **ExistAdaptor:**
Provides an interface for business logic layer, implements RepositoryAdaptor
- **RepositoryAdaptor:**
Common interface handling any kind of repositories (eXist, Daisy, and so on)



Transaction Management



- Maintaining consistency and data integrity between the repositories
- Functions:
 - Committing
 - Rollback

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Query Management

- Merging results from repositories
- Meta Queries:
independent from the metadata (type of document, part number, date of delivery/enter into force/publication) of the national standards (LMIF layer using RDFa assertions)
- Text Queries:
Full text search, in chosen part of the legal document (in the title, preamble, body, ...)
- Temporal Queries:
Based on RDFa assertions of the document:
 - using static times (date of publication, date of enter in force, ...)
 - status of the legal document in a specified date

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User Interface

- Help navigating users between related documents
- Displaying connected LKIF documents
- Using modern web technologies:
 - Ajax - Dynamic data retrieval
 - Output formatting with XSLT (XHTML)
 - Web service interface

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