

# Exposing Complex Objects

A Practical Approach



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SWIB 2011



# Outline

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- eco4r: Main Goals
- Overlay Journal: The Architecture
  - A layered Architecture
  - Components and roles of each Layer

# Terms

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- Compound Objects: semantically related web resources
- Compound/Complex Publications: a subset of compound objects with a bibliographic domain
- OAI-ORE: RDF Framework to build aggregations of web resources
- Resource-Map: OAI-ORE entity that holds all the information about an aggregation.

# eco4r: The Goals

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- I. Expose Information about complex publications
  - Not only descriptive and technical metadata but also structural and semantical
  - A good level of interoperability
  - Semantic web compatibility
  
- II. include these representations in a third party environment and to build thematical aggregations among them

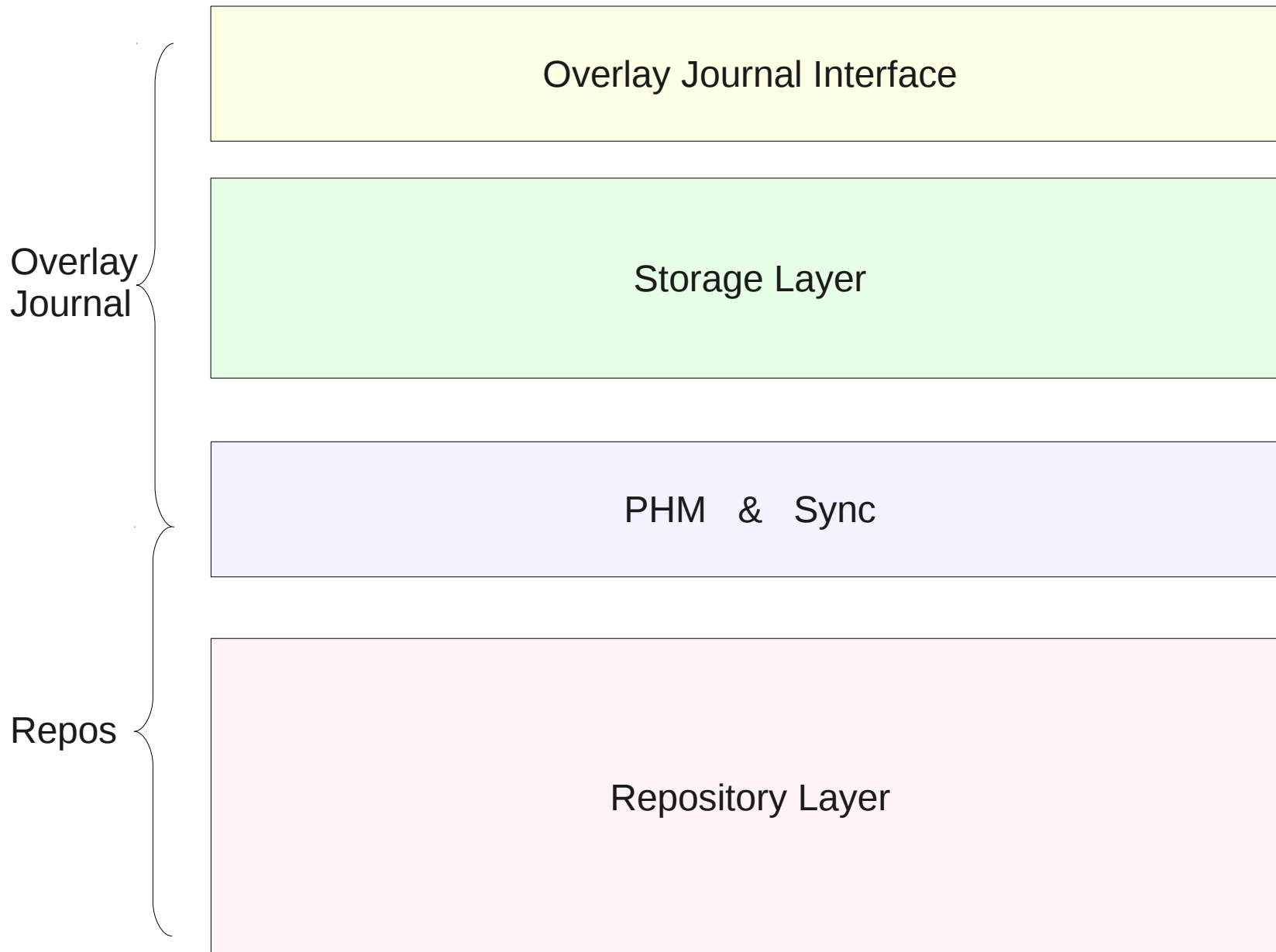
# eco4r: The Goals

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- Context Analysis: Data, Repositories and Frameworks
- Data Model based on:
  - OAI-ORE (Open Archive Initiative – Object Reuse & Exchange)
  - FaBiO: FRBR-Aligned Bibliographic Ontology
  - Further common vocabularies: DC, DC-Terms, FOAF...
- Implement plugins for Fedora and OPUS
- Develop and Implement and Overlay Journal.

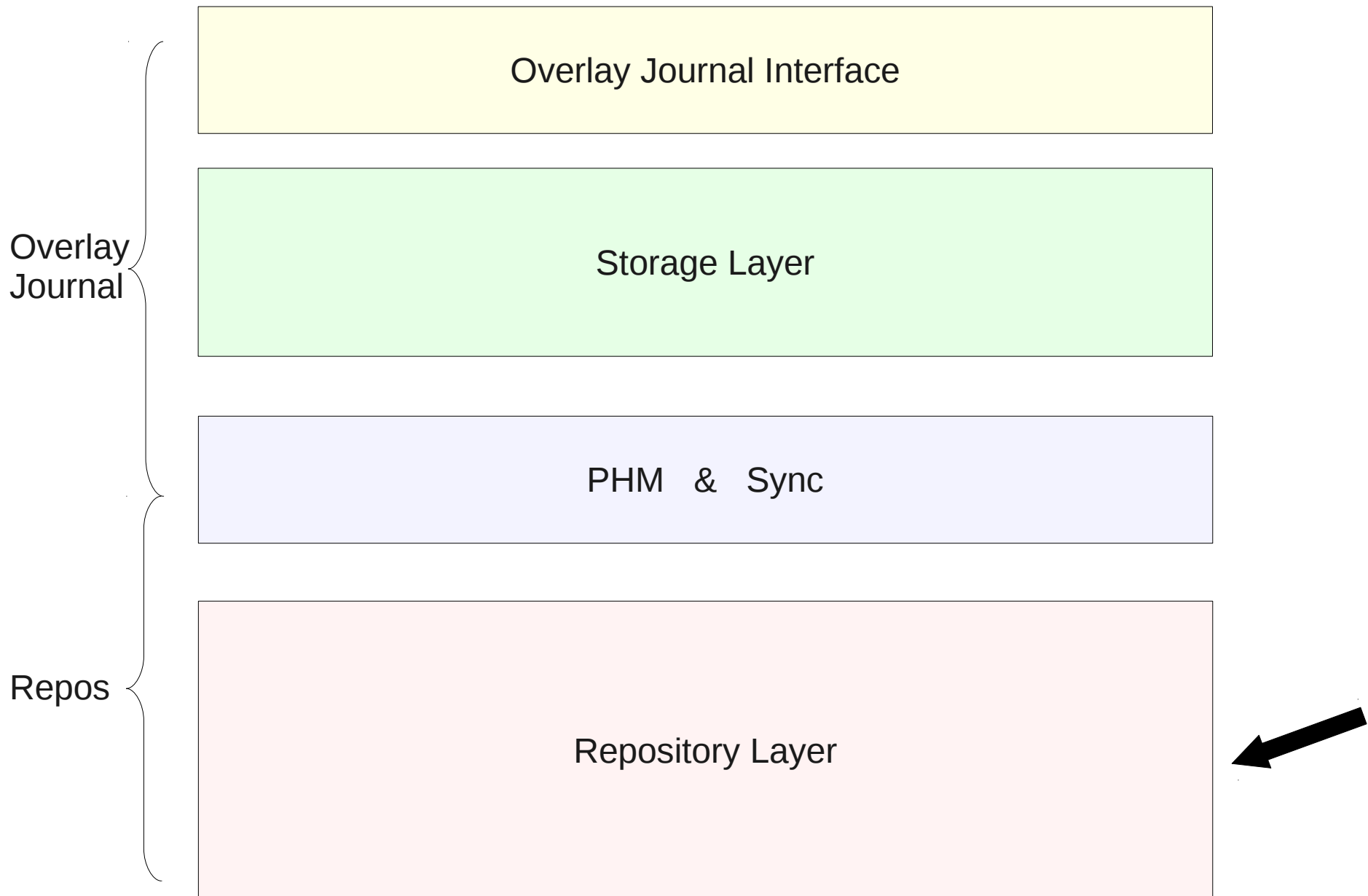
# Overlay Journal: A Layered Architecture

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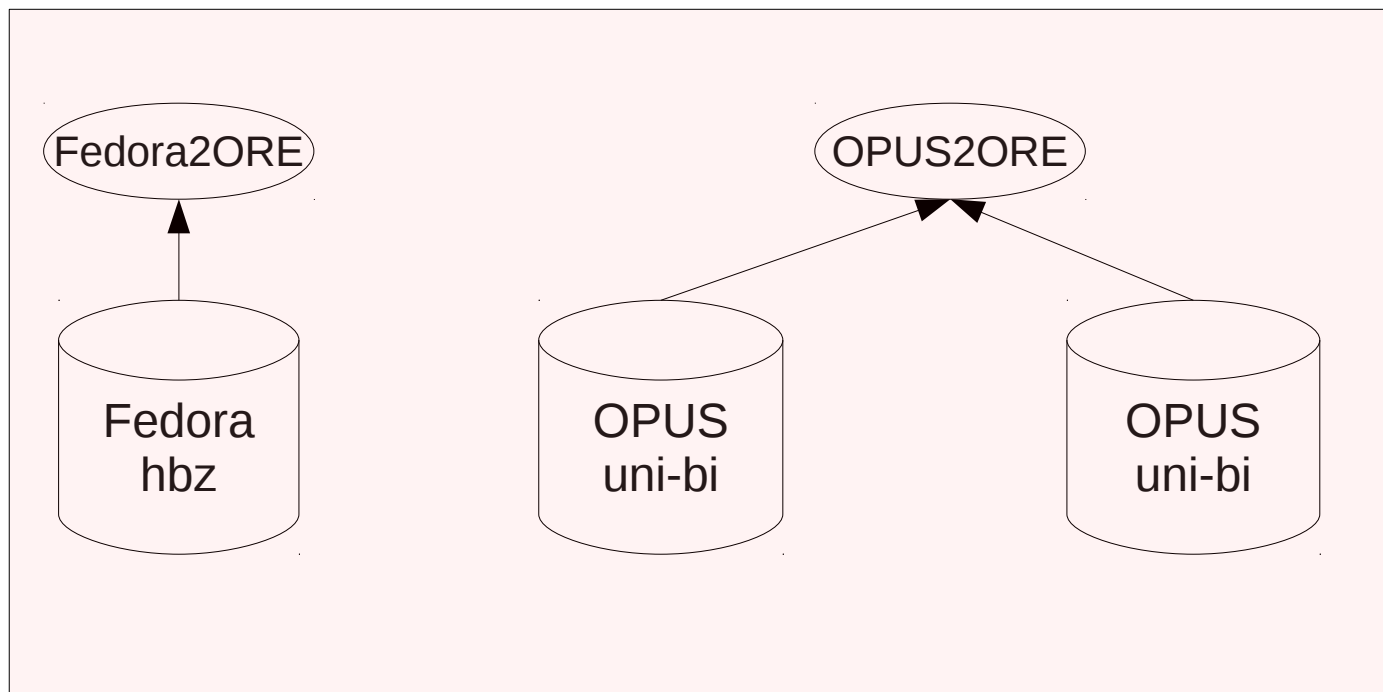
# Overlay Journal: A Layered Architecture

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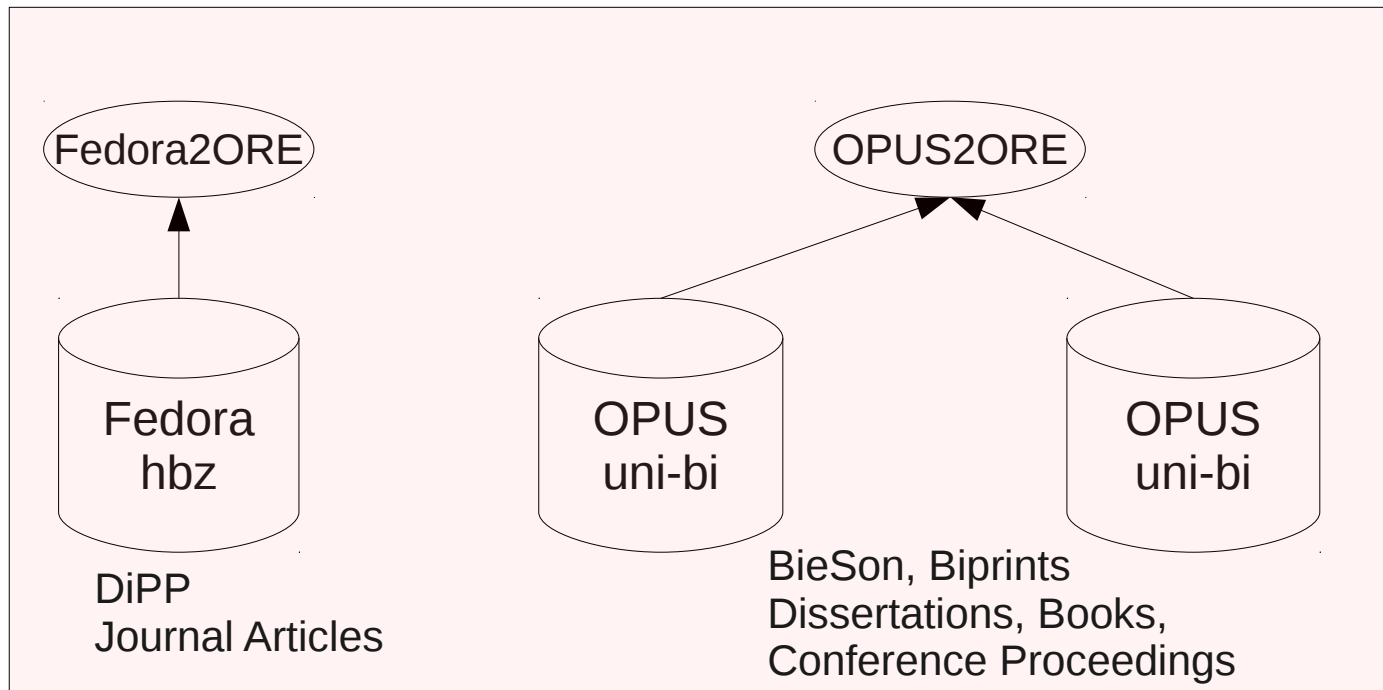
# The Repository Layer

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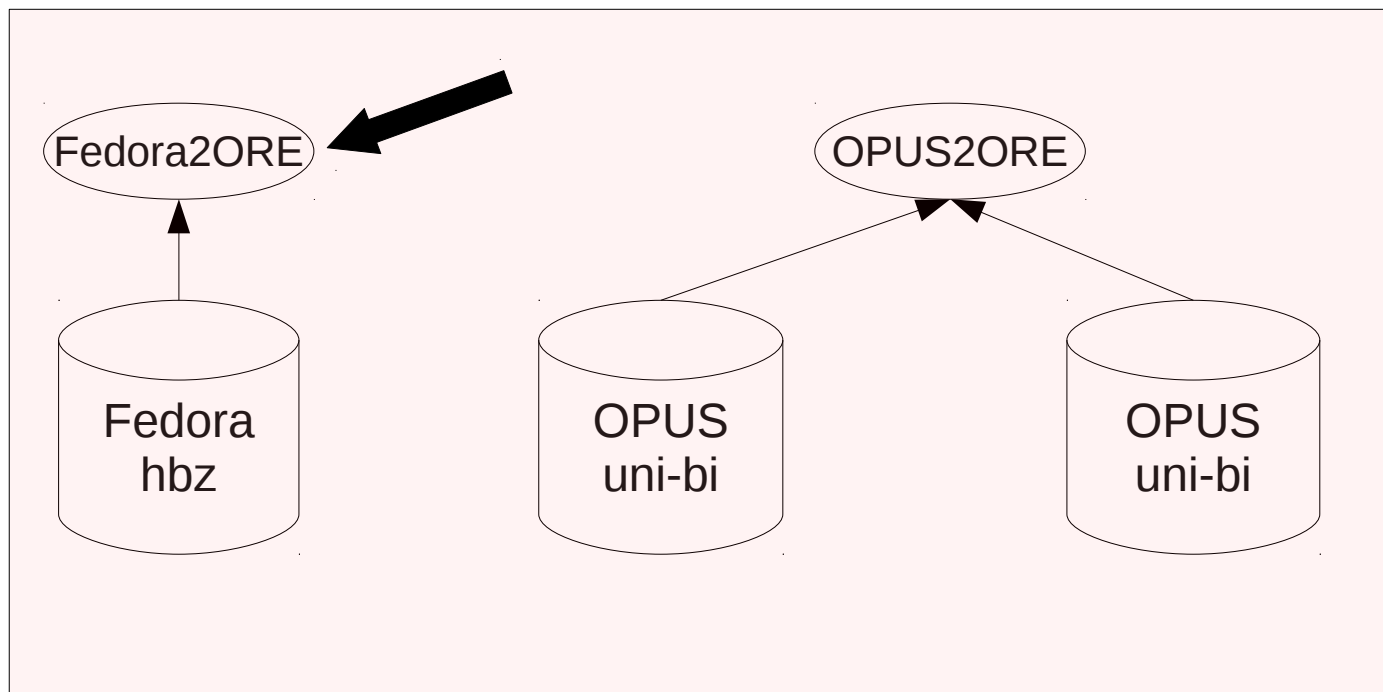


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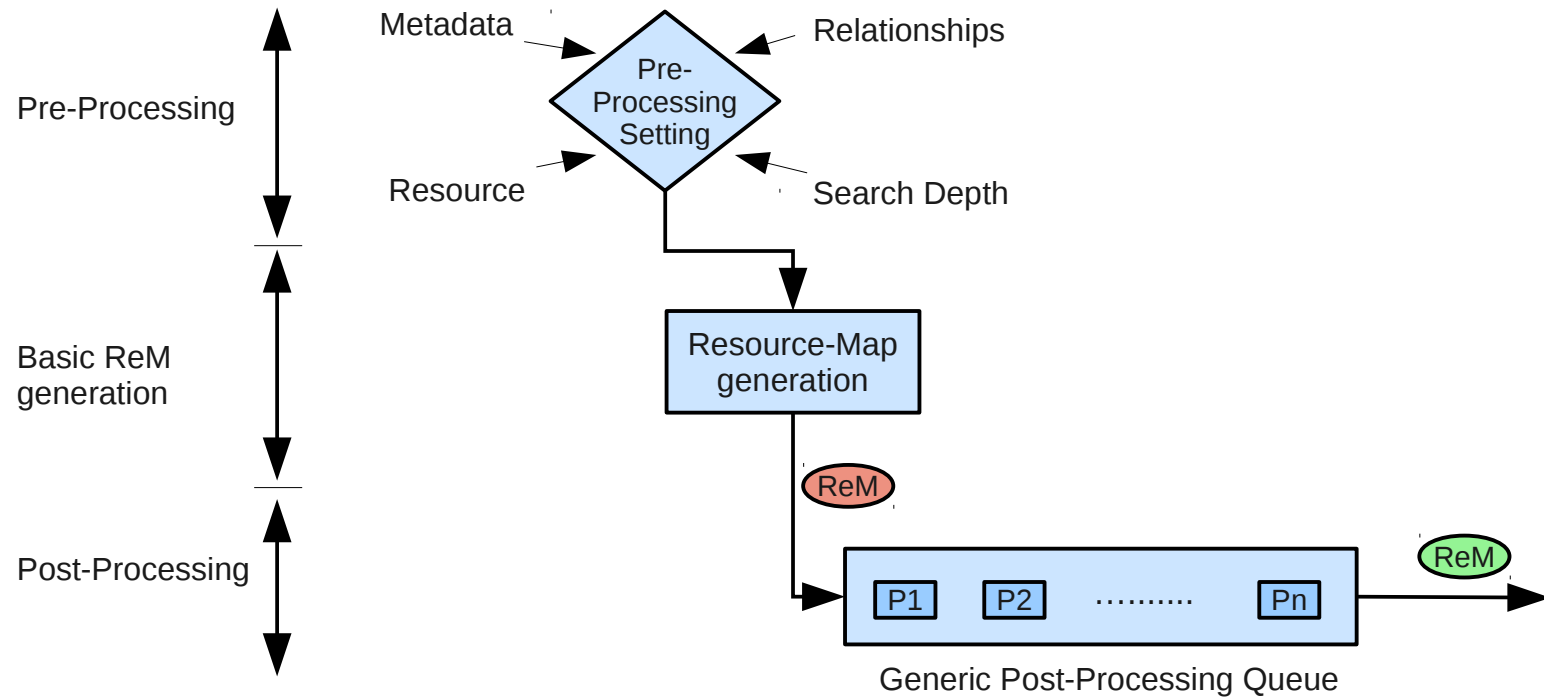


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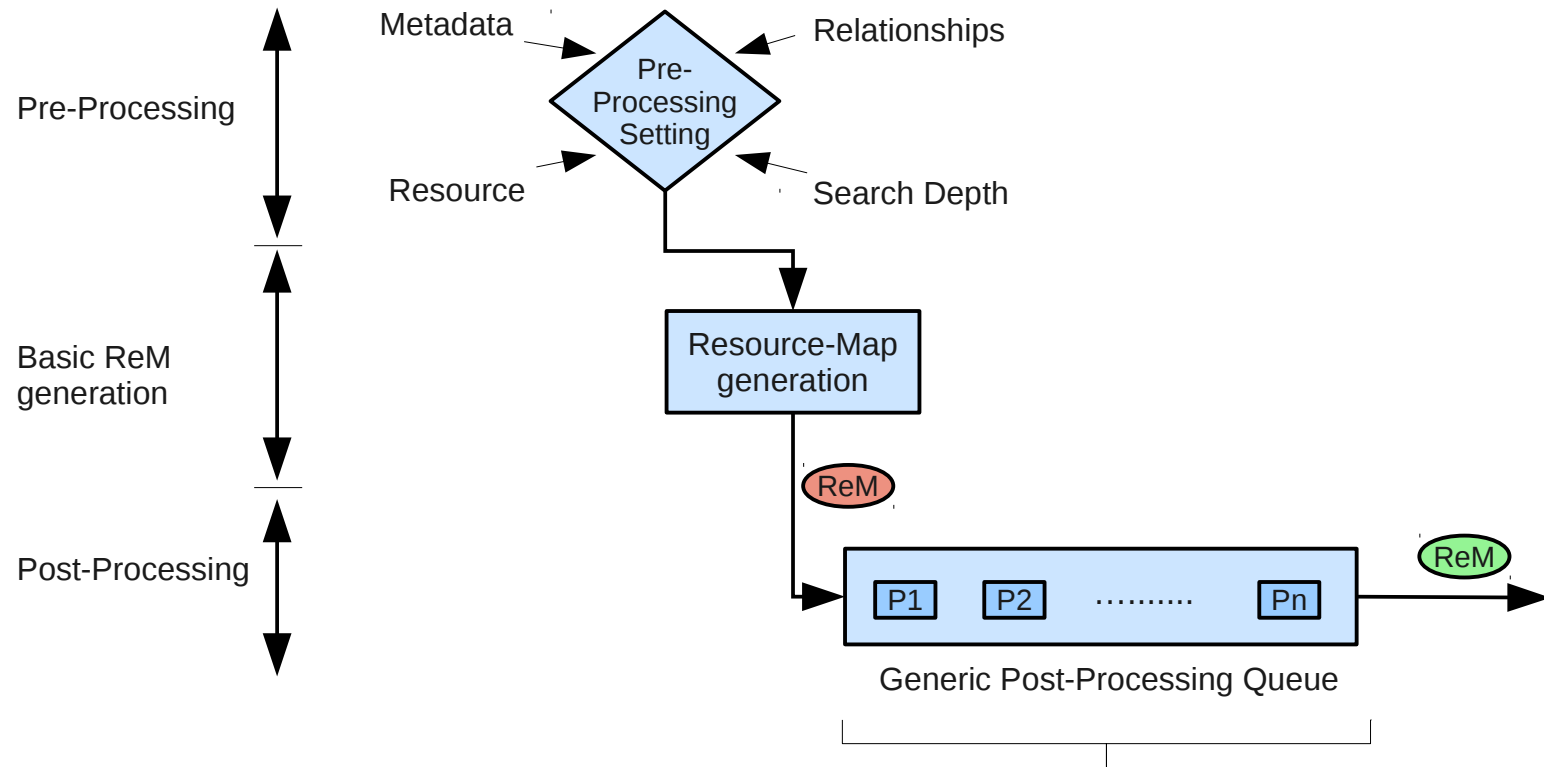
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# Fedora 2 ORE Workflow and Configuration

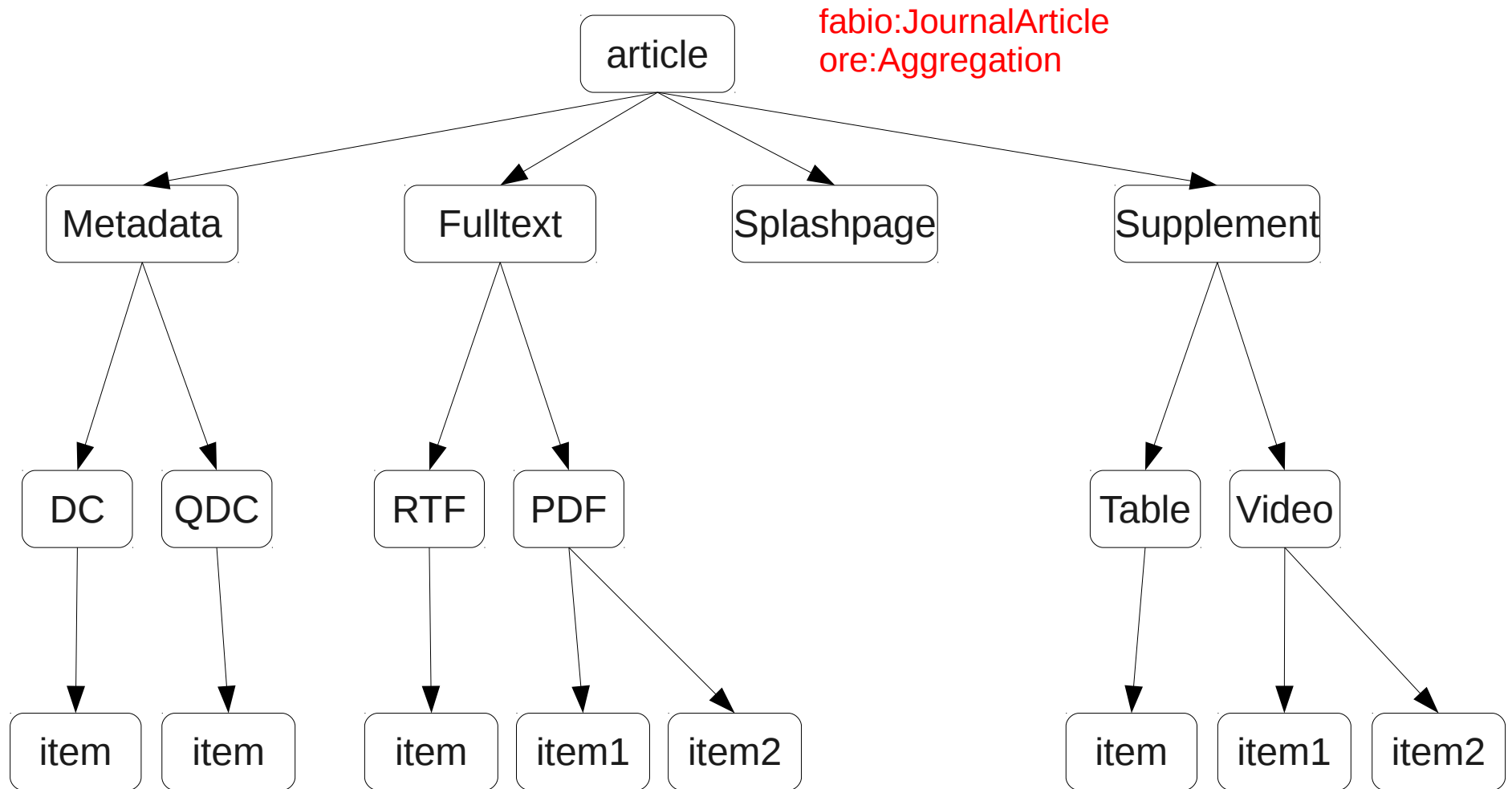


# Fedora 2 ORE Workflow and Configuration



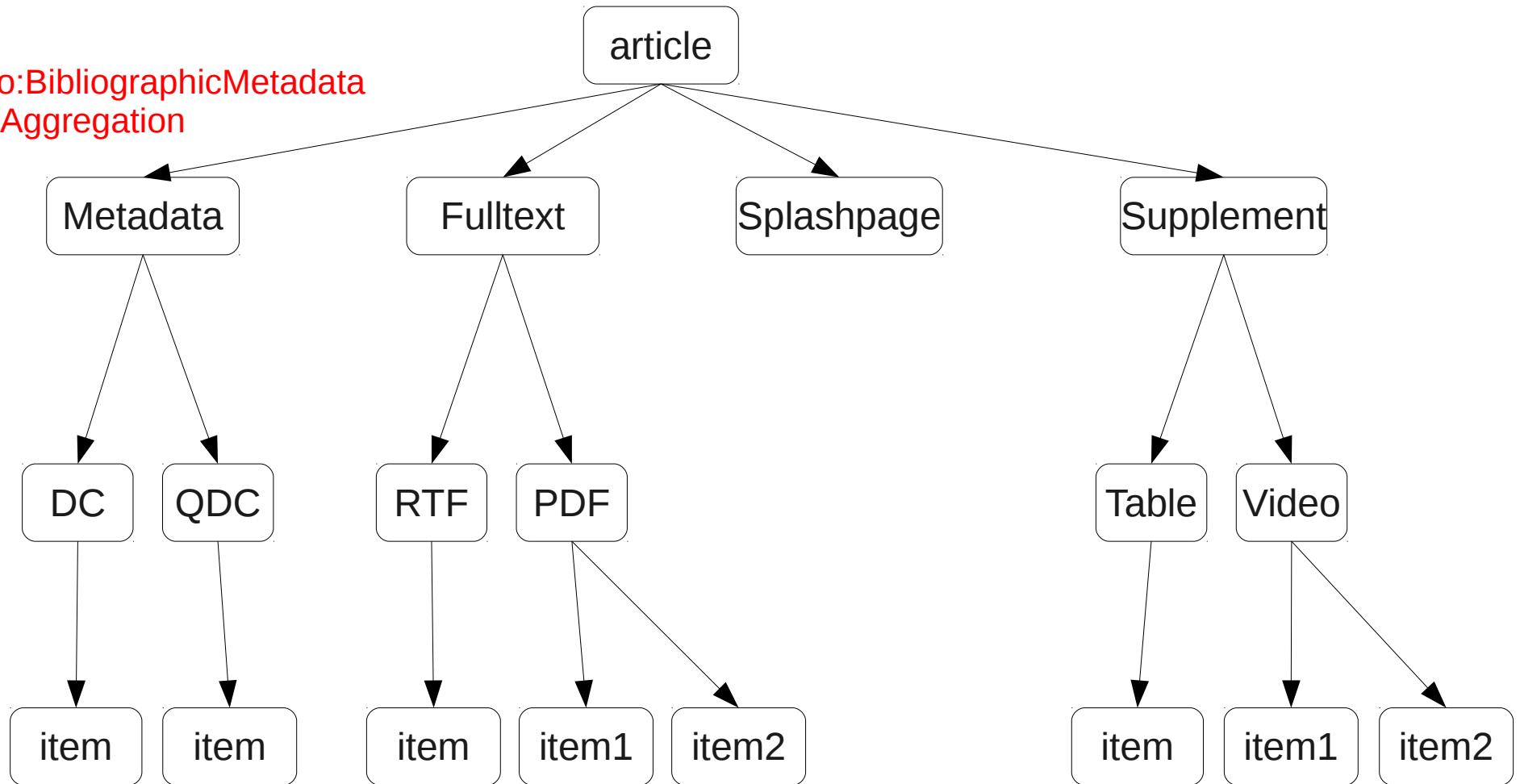
In eco4r: used to map to the eco4r data model

# eco4r Data Model: A Sample

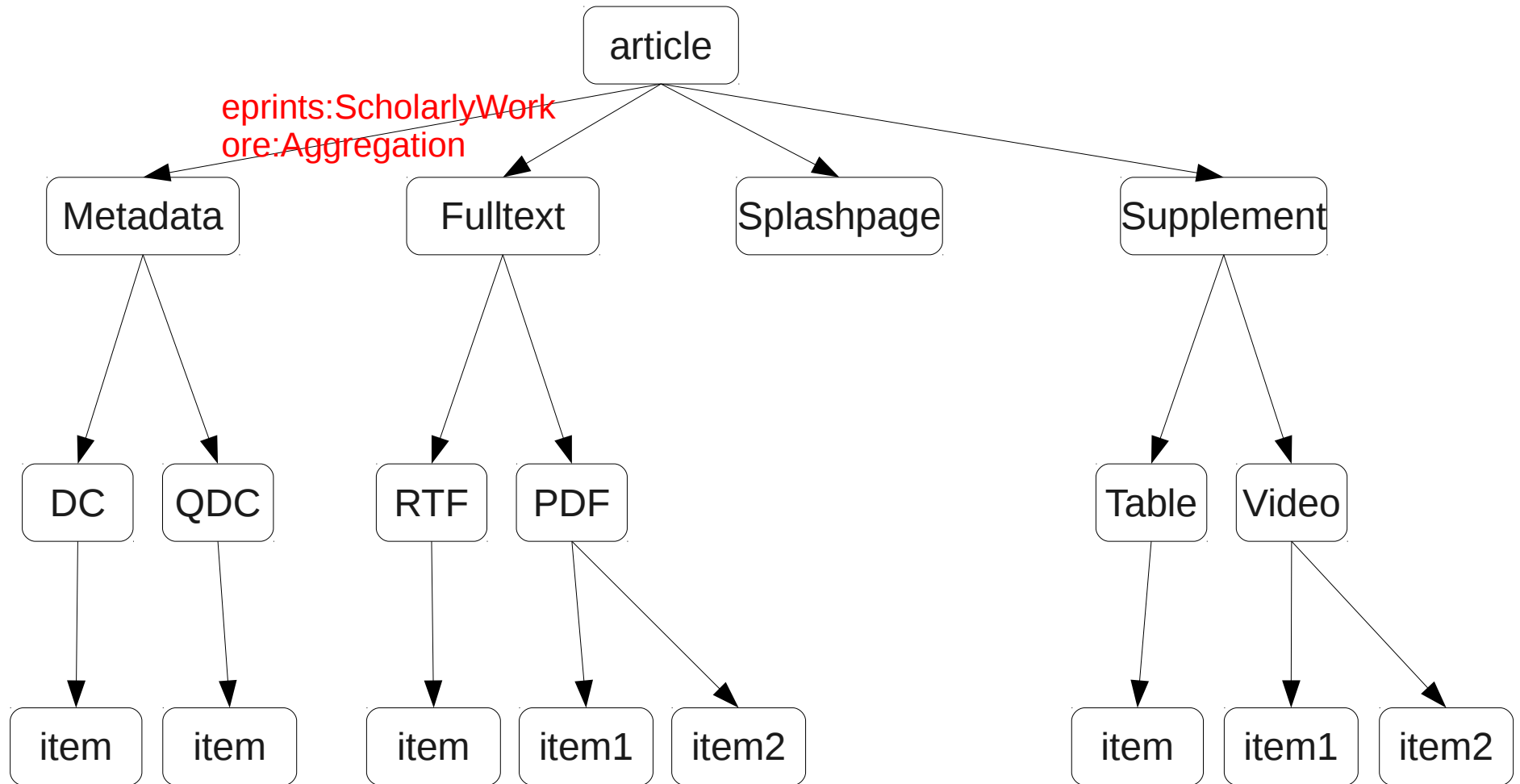


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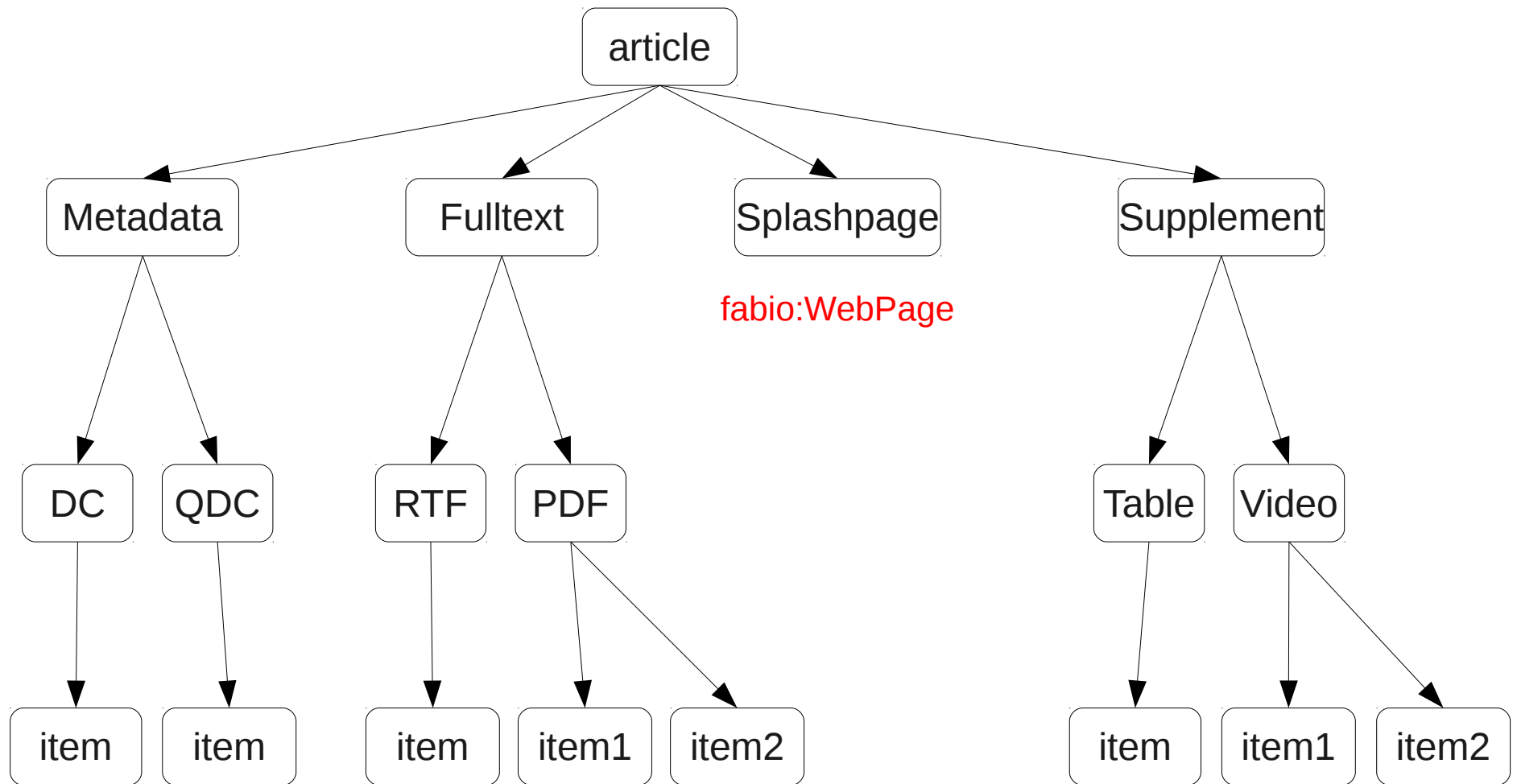
fabio:BibliographicMetadata  
ore:Aggregation



# eco4r Data Model: A Sample

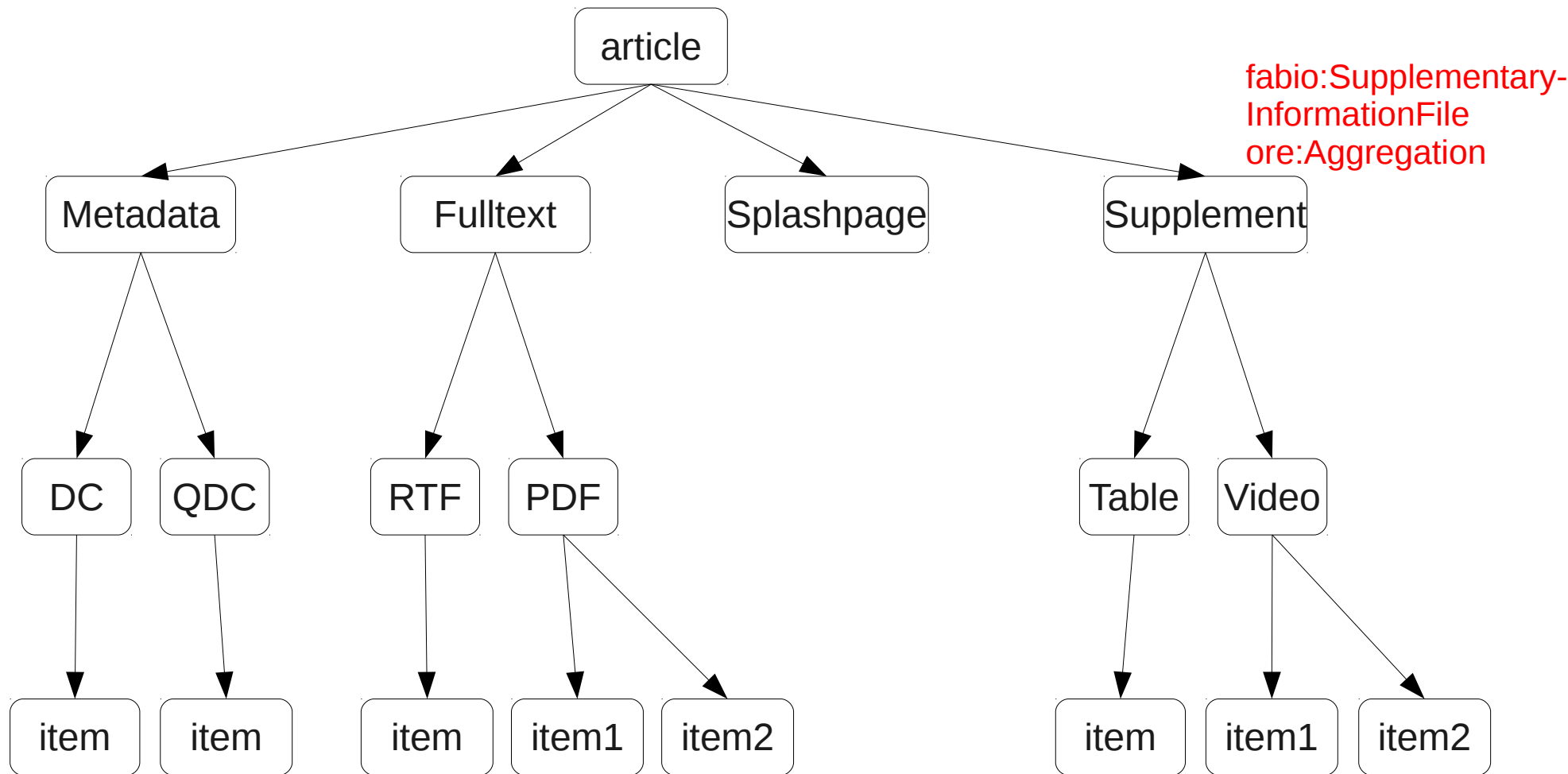


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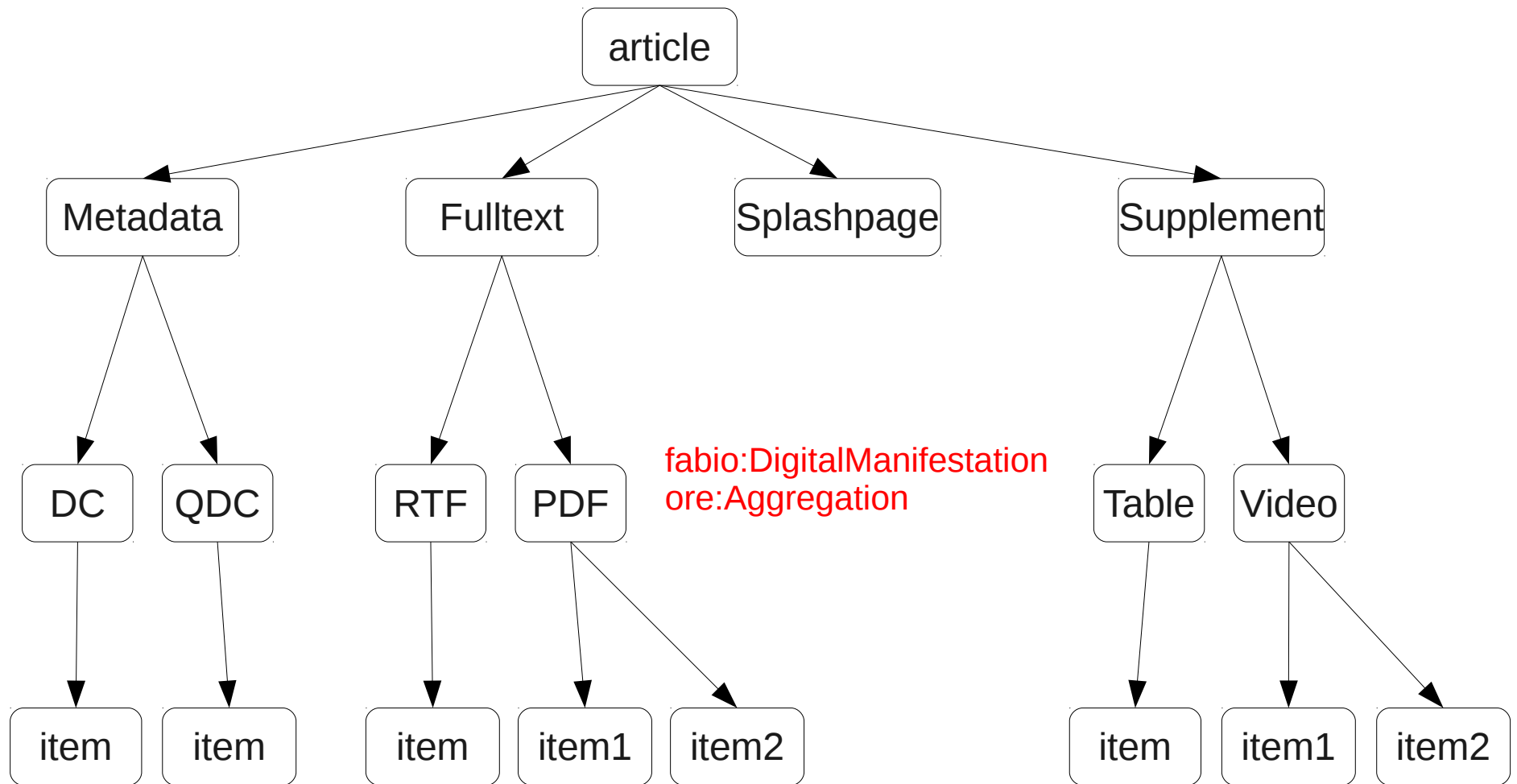




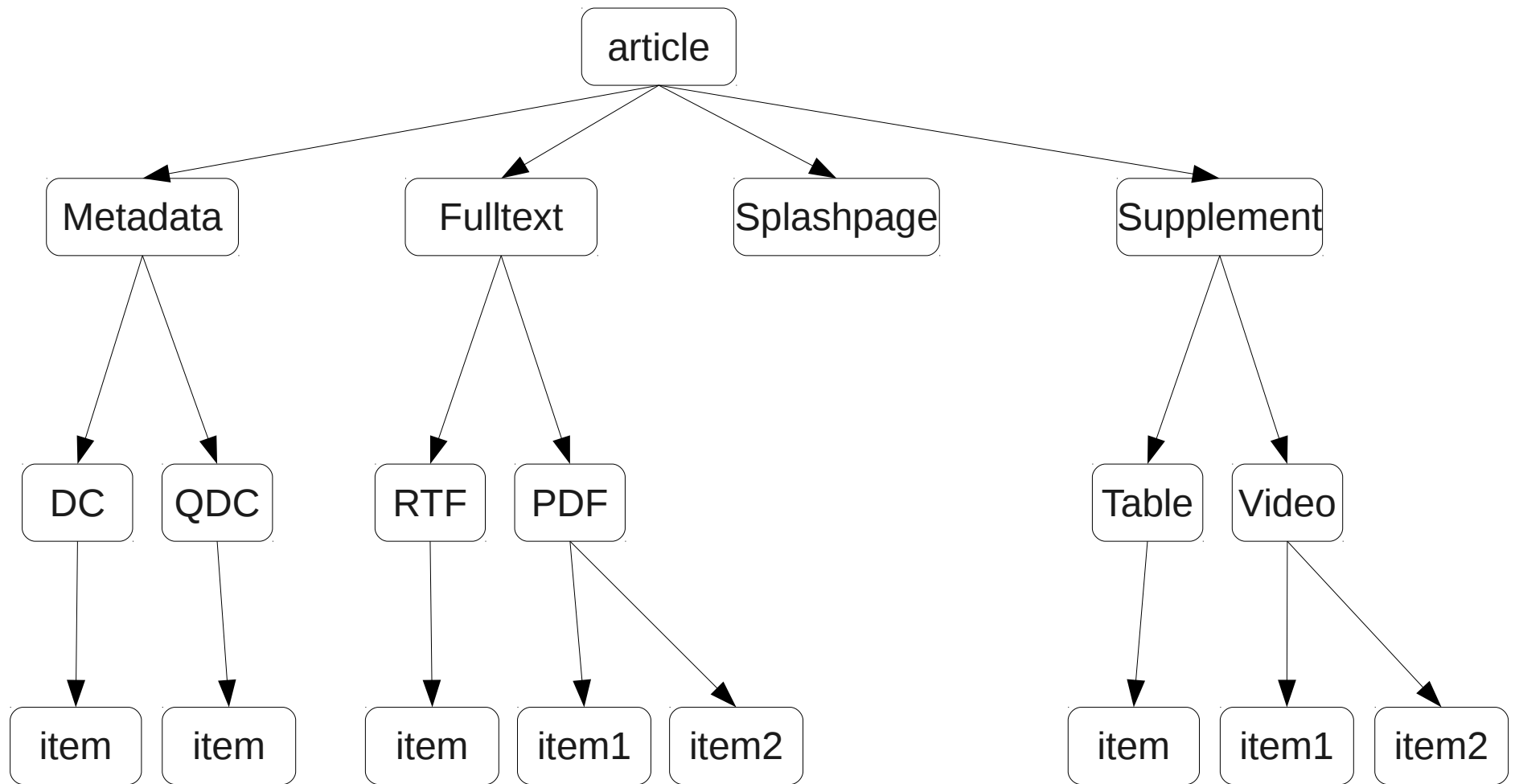
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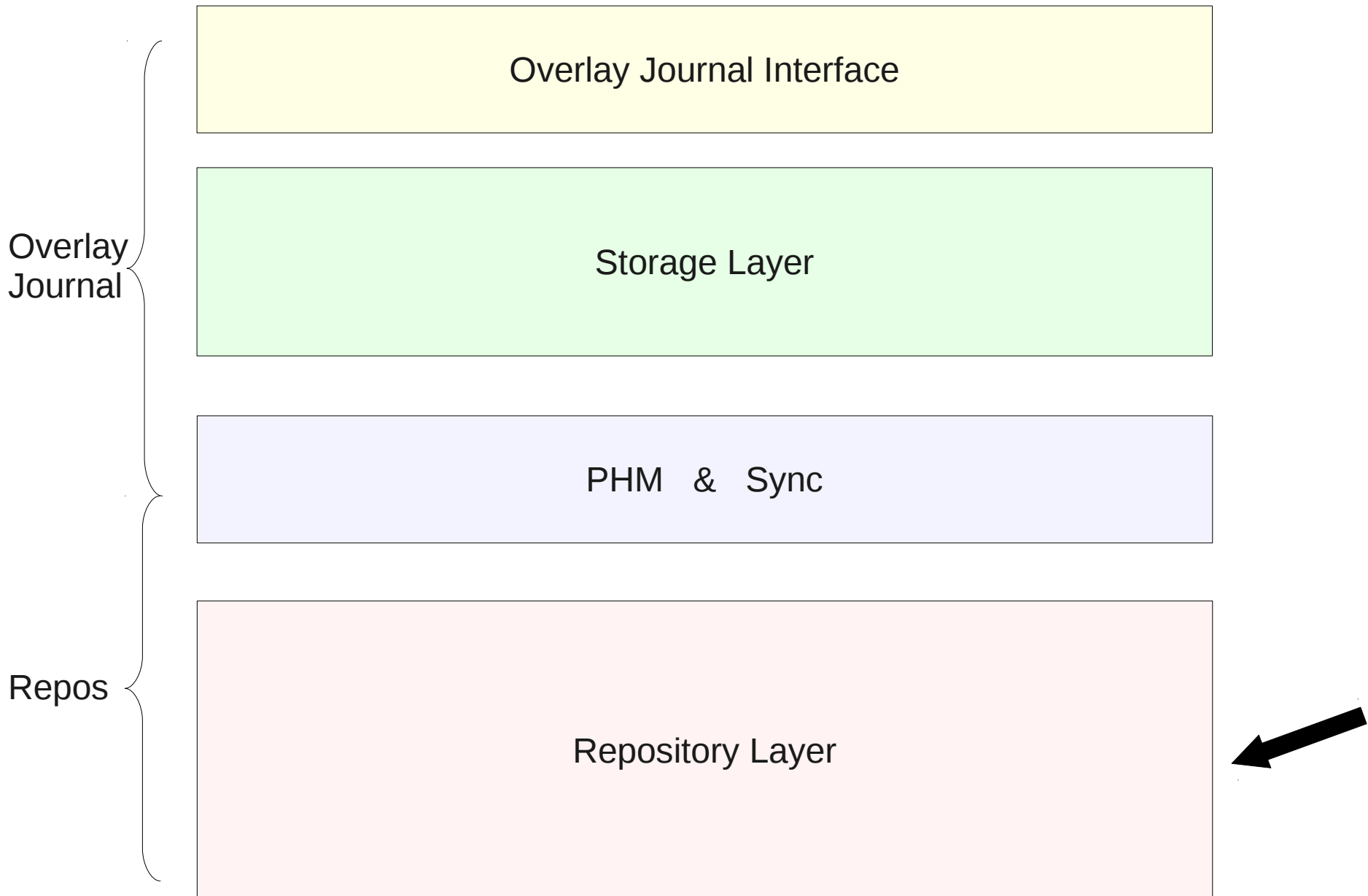
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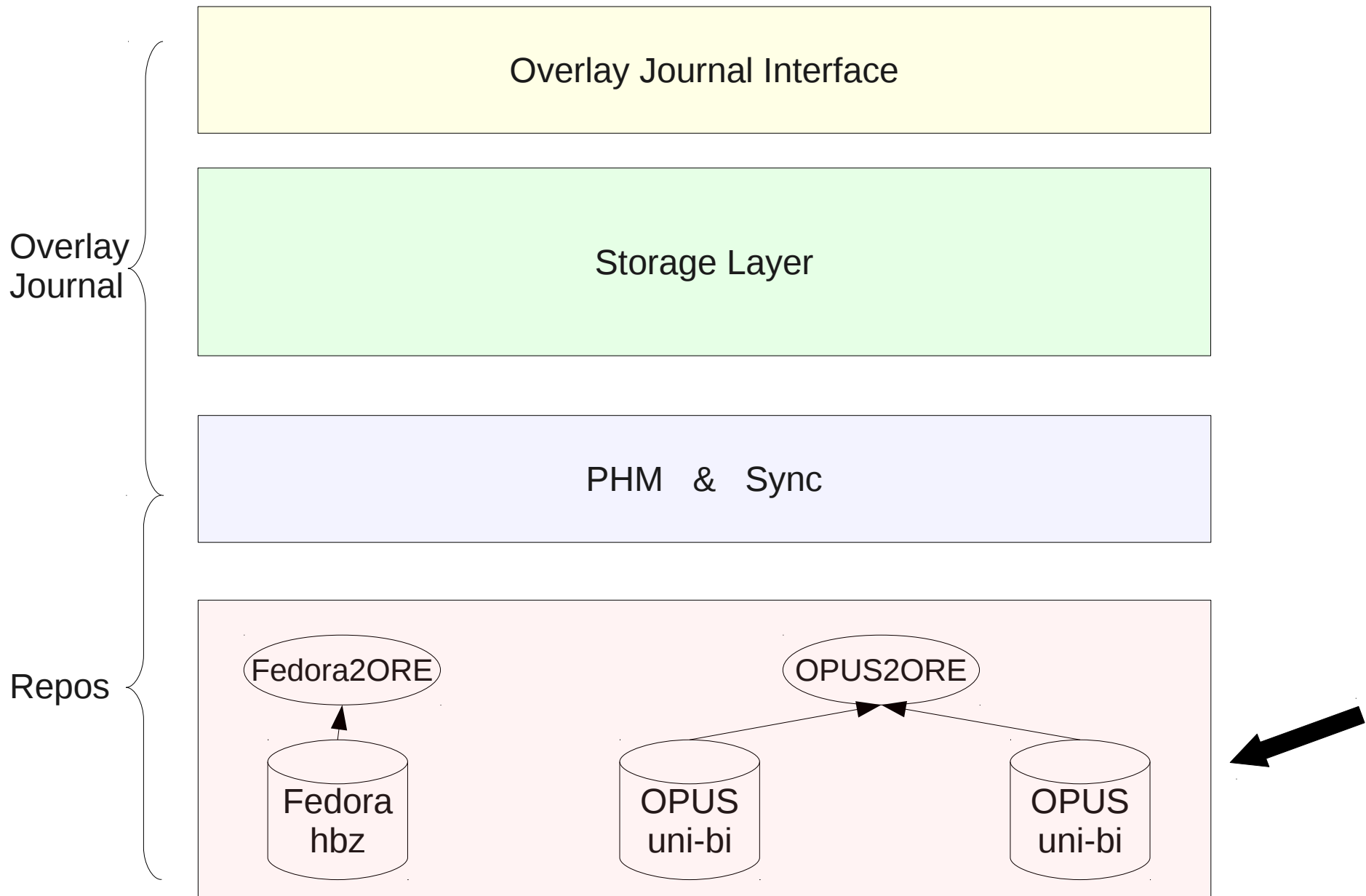
fabio:DigitalItem

# Overlay Journal: A Layered Architecture

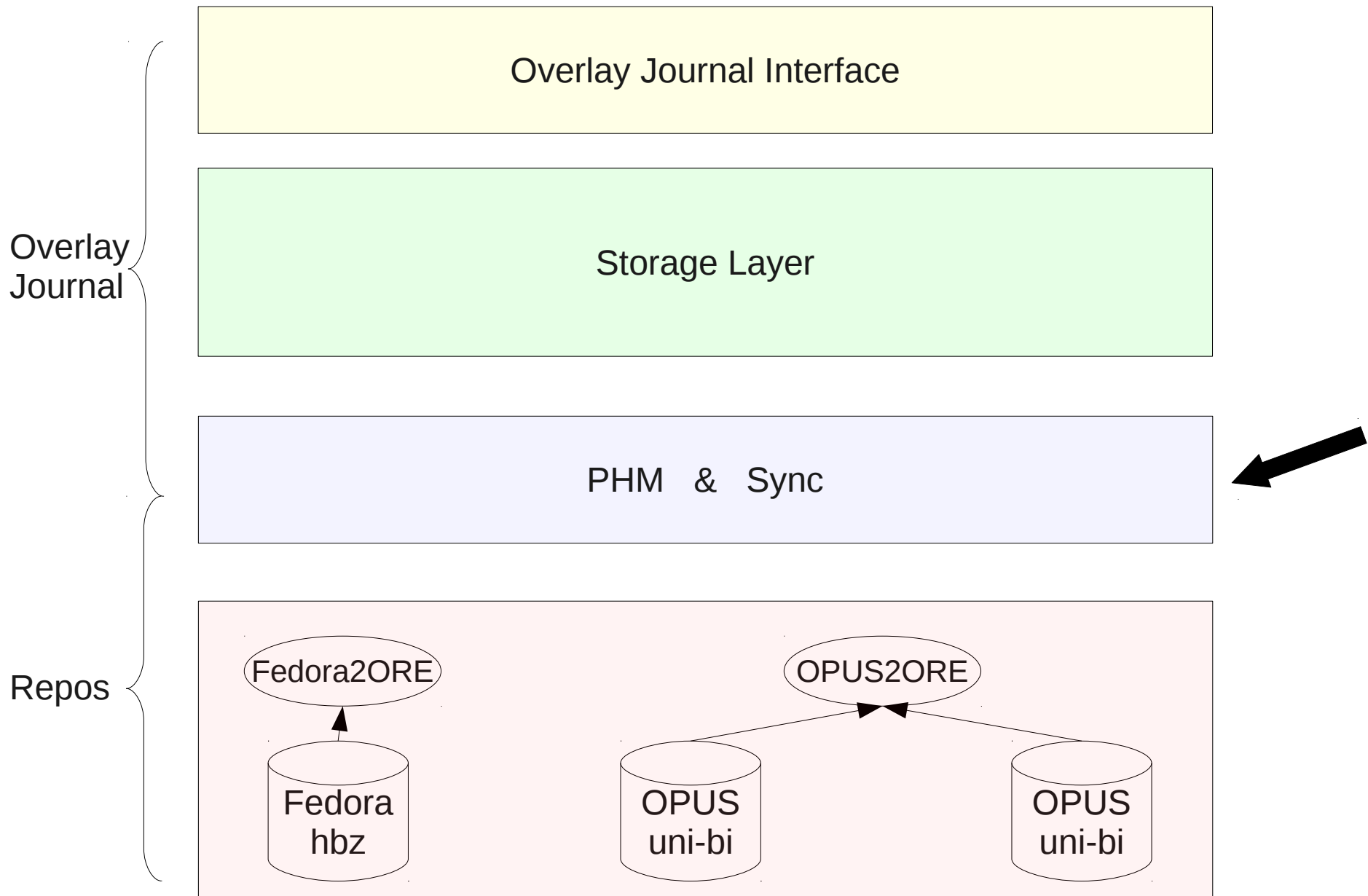
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# Overlay Journal: A Layered Architecture



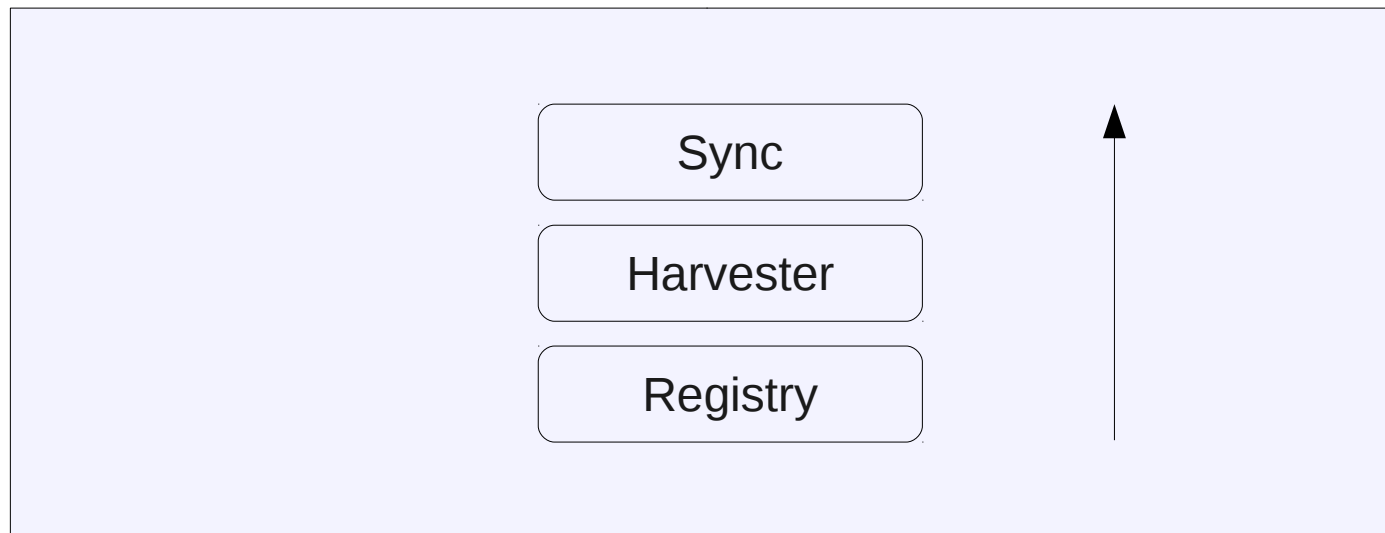
# Overlay Journal: PMH & Sync



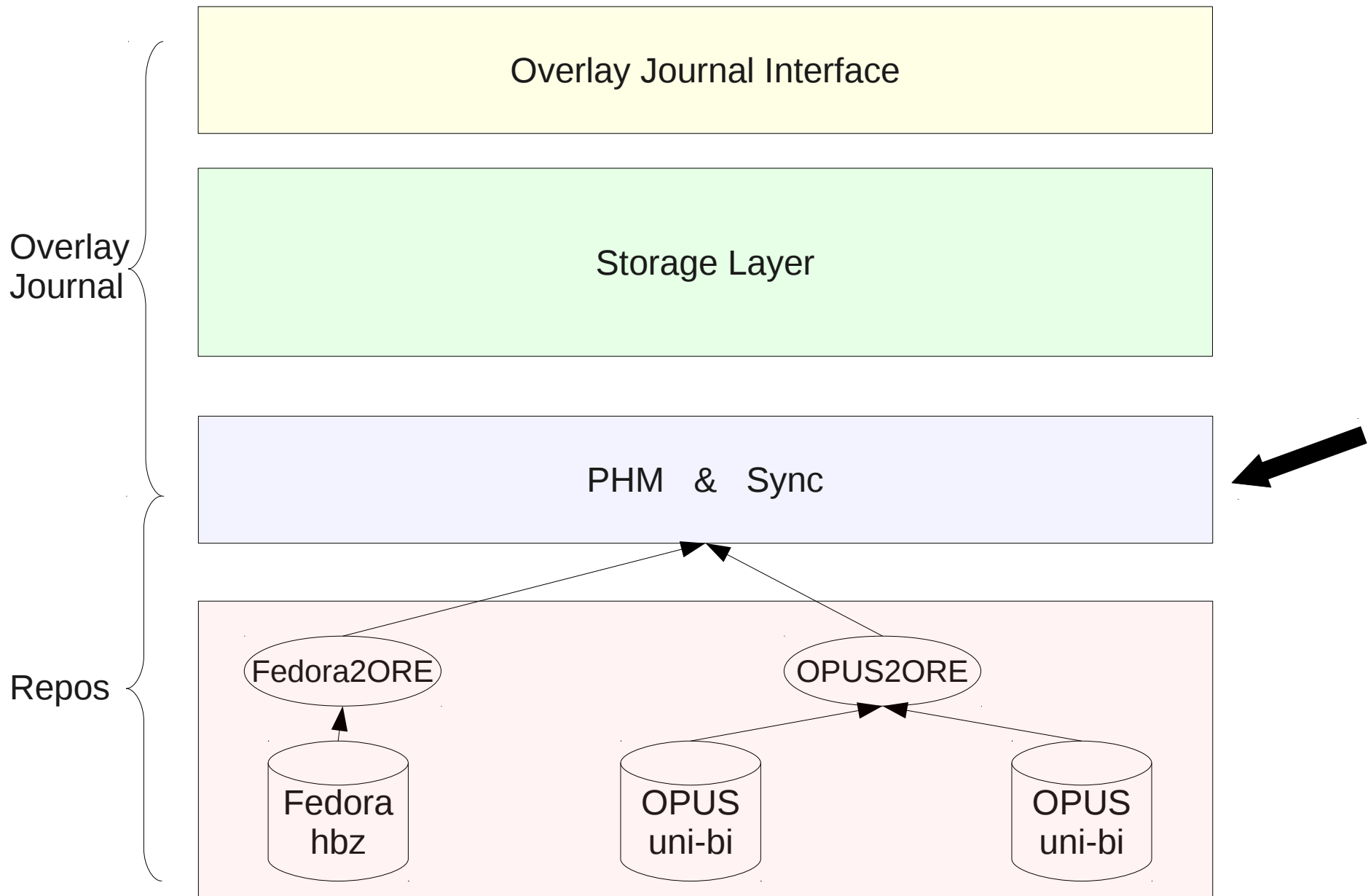
# Overlay Journal: PMH & Sync

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PHM & Sync



# Overlay Journal: PMH & Sync





# Overlay Journal: Storage Layer

Overlay Journal Interface

Storage Layer

PHM & Sync

Reps

Fedora2ORE

OPUS2ORE

Fedora  
hbz

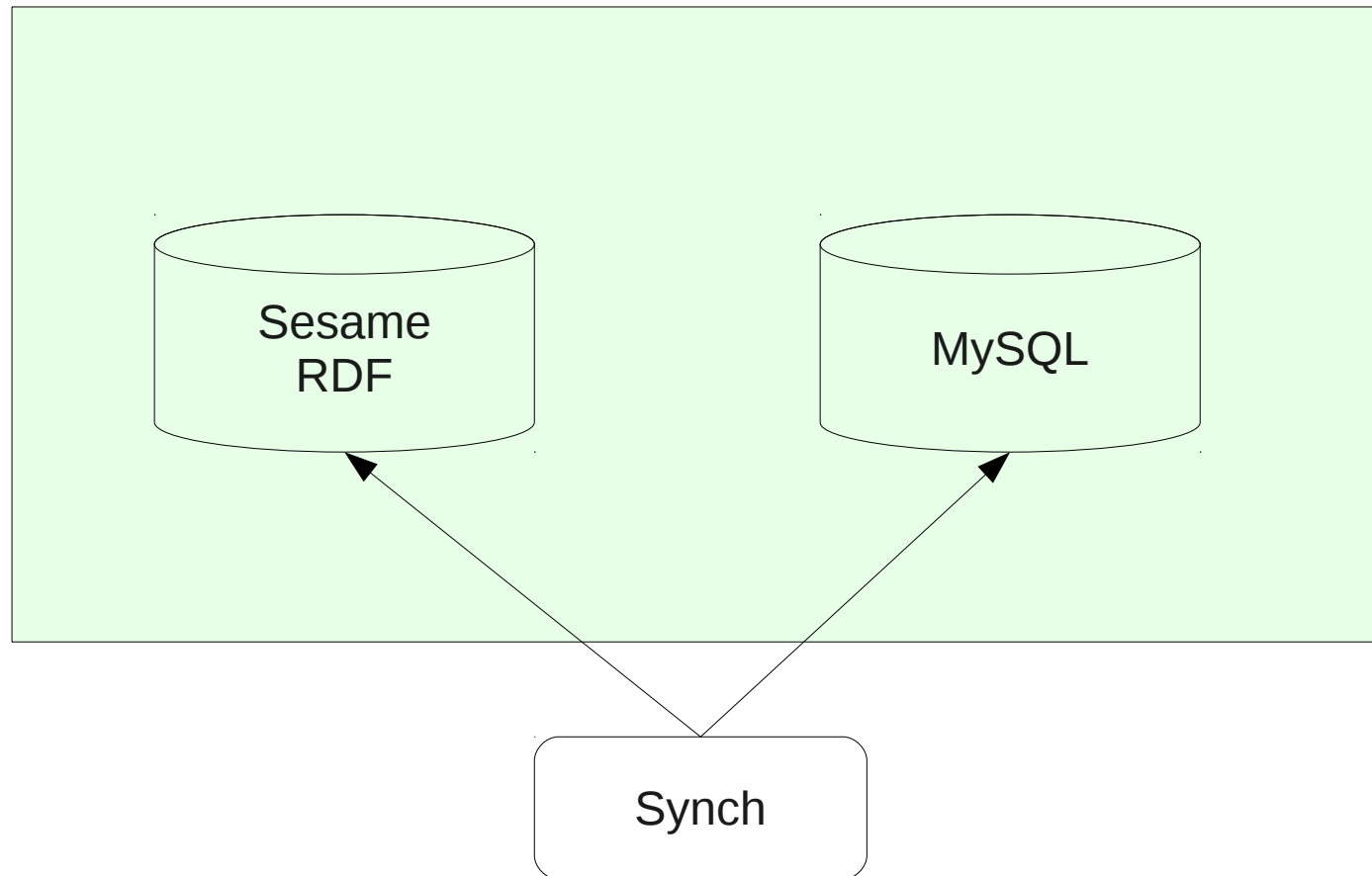
OPUS  
uni-bi

OPUS  
uni-bi

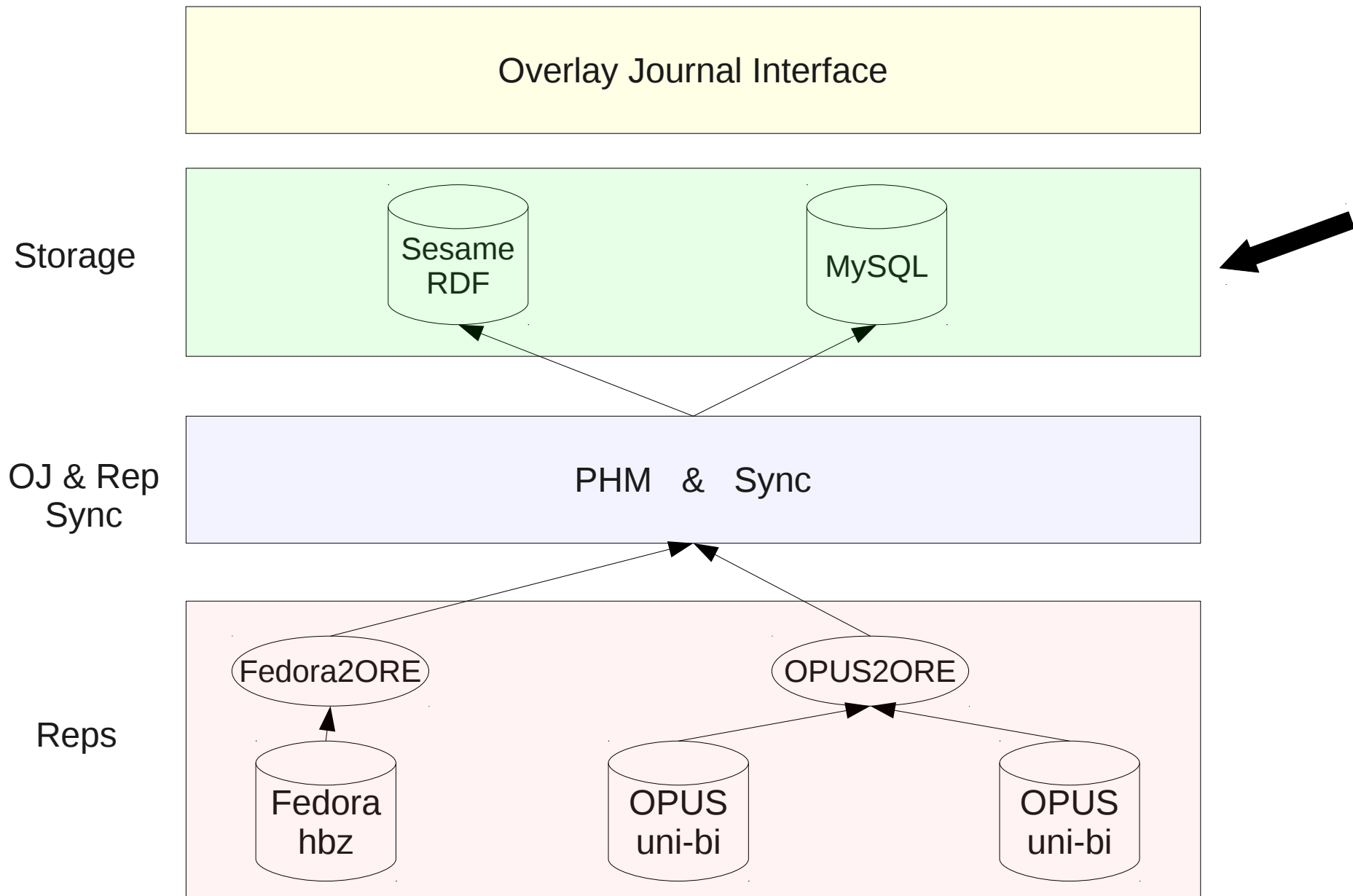
# Overlay Journal: Storage Layer

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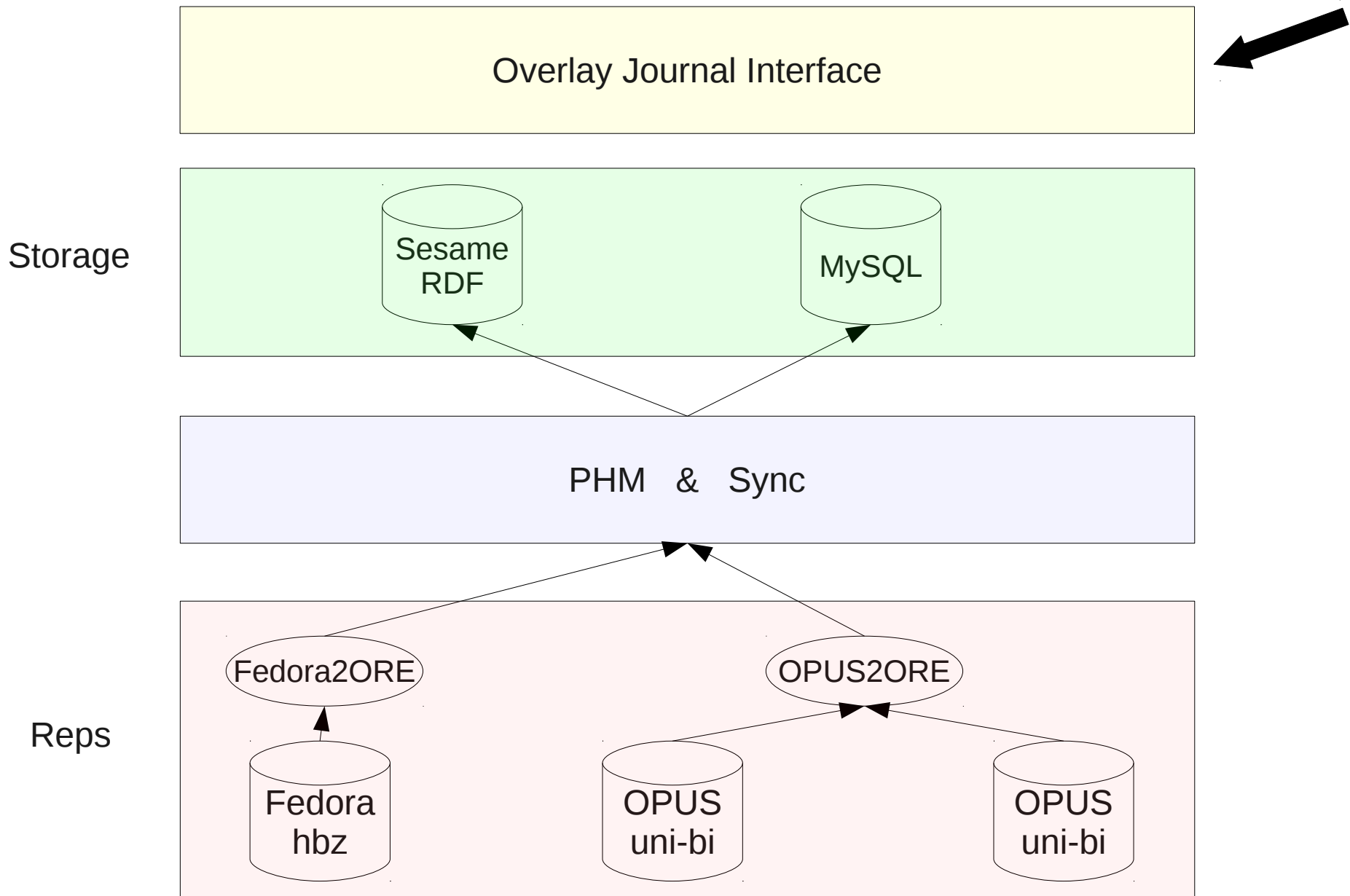
Storage Layer



# Overlay Journal: Storage Layer

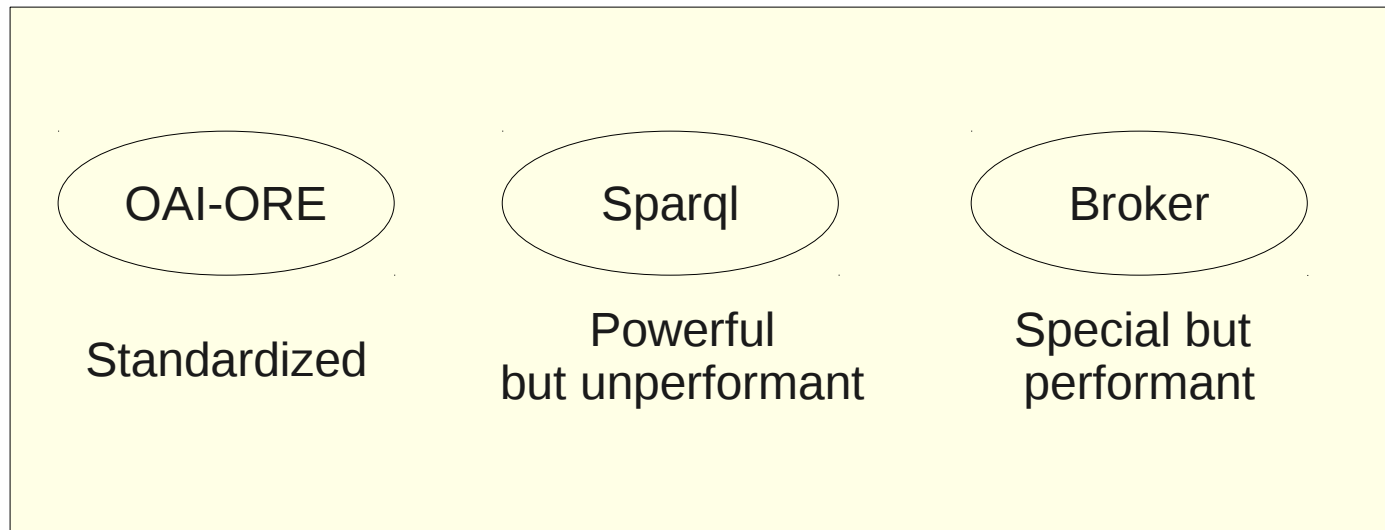


# Overlay Journal: OJ Interface

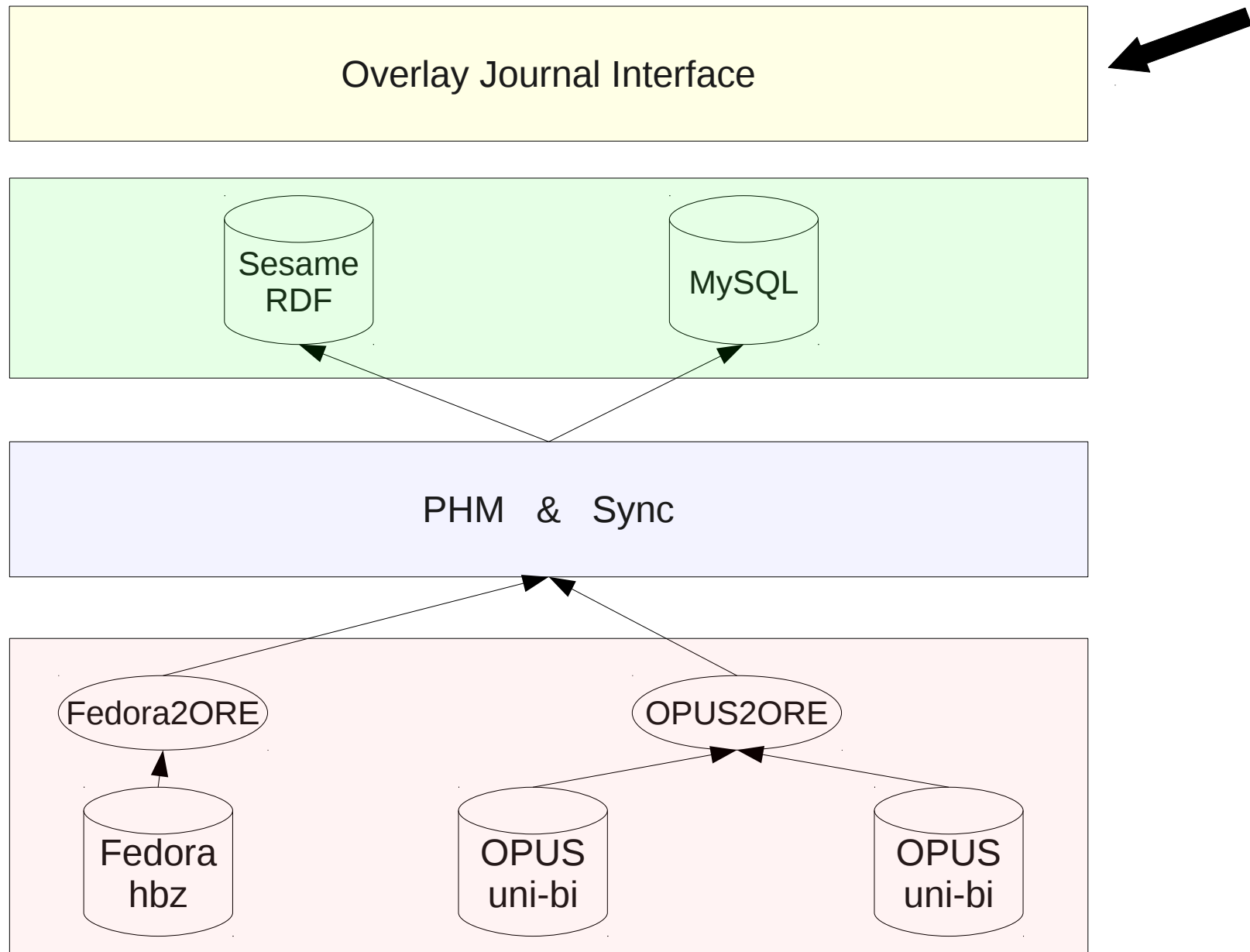


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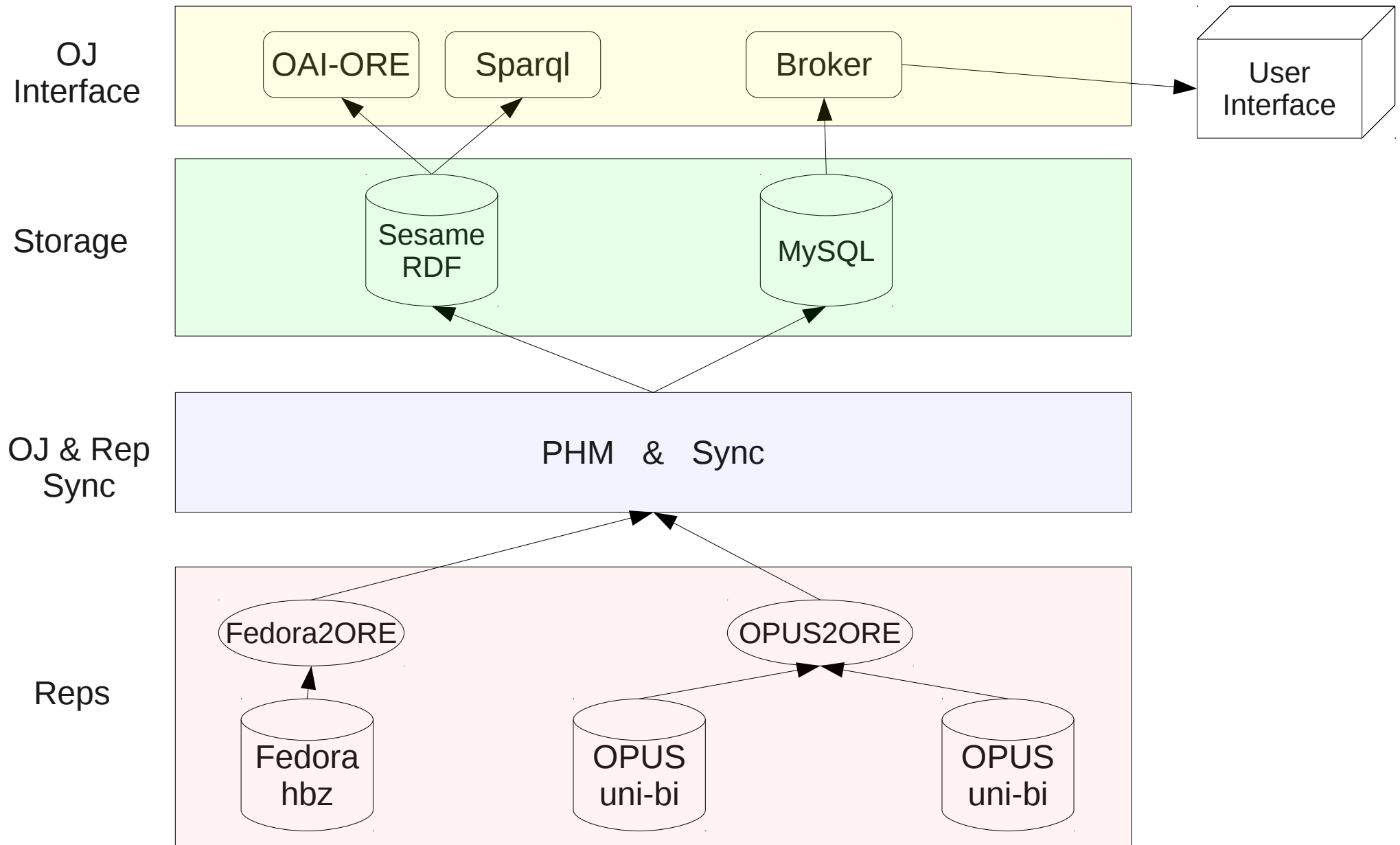
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# Overlay Journal: OJ Interface



# Overlay Journal: OJ Interface



# Review

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- Well, aggregating information from distributed repositories is not extraordinary
- BUT! We achieved this goals using techniques like RDF and OAI-ORE
  - RDF data can be interoperably exchanged using standards
  - Data can be easier integrated in the Semantic-Web
  - Facilitates interlinking the data with external informations (authority Information, DBPedia ...)



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Thank you