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think culture

Europeana

Sao Paolo, September 8th, 2009

Bram van der Werf, Technical Director Europeana

- Europeana.eu prototype
- Europeana v1
- Europeana and the current and new projects
- A technical overview, interoperability, standards and applied technologies

Europeana context

- EC i2010 agenda with Digital libraries as one of the 3 “flagship initiatives” setting up the European Digital Library as a common multilingual access point to Europe's distributed digital cultural heritage including all types of cultural heritage institutions

EUROPEANA CONTEXT

- 2008: \geq 2 million digital objects; multilingual; searchable and usable; work towards including archives
- 2010: \geq 6 million digital objects; including also museums and private initiatives

Europeana v1: metadata ingest & reuse

- Contribution to the prototype on the basis of willing institutions. Contracts for metadata sharing and reuse in Europeana v1
- The first release in July 2010 will integrate APIs for interactions with other applications
 - Functional specifications fixed in September 2009
- Second release in April 2011
 - Functional specifications fixed in June 2010
- Open source sandbox and R&D infrastructure in place for partners' projects in March 2010
- ESE is the only metadata set used until July 2010. Implementation of more sophisticated object model will be prototyped until July 2010 to prepare its integration in the second release. This prototyping will be done on a subset of Europeana collections.

Forthcoming Projects

- **Europeana v1.0**

- Is the successor network to EuropeanaNet. Turns current prototype into an operational service. It creates automated work flows and processes for the ingestion of content and management of a full scale business operation. End user marketing ensures take up and sustainability, together with longer term financing solutions. Begins February 09 ends July 11

- **EuropeanaConnect**

- Is a set of technical work packages delivering components essential for the operational Europeana.eu as a truly interoperable, multilingual and user oriented service. portal. Aims to begin May 09 Includes:
 - Semantic resource discovery
 - A unique repository of language resources
 - OAI Management Infrastructure
 - Metadata registry for interoperability
 - Service registry for integration of external services
 - Resolution discovery service for unique resource identification
 - Multimedia annotation, GIS and eBooks on demand
 - Accessibility for Mobile Devices
 - Increased audio content

Europeana.eu: single access point to European digital cultural heritage

- Prototype proof of concepts
 - Discover and browse the digital cultural heritage of the 27 European countries
 - Increase the visibility of the digitisation efforts across four domains: Archives, Audio visual archives, Libraries, Museums
 - Agreement on standards facilitating interoperability
 - Services to general users on the Web
- Europeana v1: Open functional architecture and standards facilitating
 - A contribution/distribution business model: europeana.eu as a facilitator for cultural institutions
 - Moderated user generated content
 - Semantic Web



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Europeana is testing newly configured hardware. The site is therefore open for you to use but the user experience may not be optimal in this test phase e.g.: the number of users will be limited in peak times.

[Advanced search](#)





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Matches for: wolfgang mozart

All

Texts (160)

Images (393)

Videos (29)

Sounds (127)



Results 85 - 96 of 709

Page: 3 4 5 6 7 8 9 10 11 12



Bildnis Wolfgang Amadeus ...
Österreichische Nationalb...



Bildnis Wolfgang Amadeus ...
Mansfeld, Josef Georg
1789
Österreichische Nationalb...



Bildnis Wolfgang Amadeus ...
Österreichische Nationalb...



Bildnis Wolfgang Amadeus ...
Österreichische Nationalb...



Wolfgang Amadeus Mozart
Badol-Bertrand, Florence
1999
Cité de la musique



Wolfgang Amadeus Mozart
Hondré, Emmanuel
1998
Cité de la musique



Wolfgang Amadeus Mozart
Badol-Bertrand, Florence
1999
Cité de la musique



Wolfgang Amadeus Mozart, ...
Amsler, Samuel
Saxson State Library - Dre...



Titelblatt eines Sextetts...
Österreichische Nationalb...



Notenseite eines Quartett...
Österreichische Nationalb...



Portrait de Wolfgang Amad...
Anonyme,
Culture.fr/collections



Wolfgang Amadeus Mozart (...)
Posch Léonhard (1750-1831),
1789
Culture.fr/collections



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- europe (6)
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- netherlands (4)
- poland (3)
- Austria (1)

By date +

By provider -

- Culture.fr/collectio... (297)
- Cité de la musique (172)
- Saxon State Library ... (76)
- Institut national de... (66)
- Österreichische Nati... (57)
- Scran (10)
- The British Library (6)
- Bibliothèque nationa... (5)
- Het Geheugen van Ned... (4)
- Országos Széchényi K... (4)
- Centre Virtuel de la... (3)
- The National Library... (3)
- Video Active (2)
- Bayerische Staatsbibl... (1)

Matches for: wolgfang mozzart

All

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Results 85 - 96 of 709

Page: 3 4 5 6 7 8 9 10 11 12 ← →



Bildnis Wolfgang Amadeus ...
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Mansfeld, Josef Georg
1789
Österreichische Nationalb...



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Cité de la musique



Wolfgang Amadeus Mozart, ...
Amsler, Samuel
Saxon State Library - Dre...



Titelblatt eines Sextetts...
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Wolfgang Amadeus Mozart (...)
Posch Léonhard (1750-1831) ,
1789
Culture.fr/collections



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Matches for: wolfgang mozart

Item details

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Portrait de Wolfgang Amadeus Mozart (enfant)

Creator: Anonyme ,

Description: miniature (peinture),

Provider: Culture.fr/collections

Language: fr

Source: Autriche, Vienne, Wien Museum Karlsplatz

Rights: Diffusion uniquement sur le territoire français. (C) BPK, Berlin, Dist RMN - Alfredo Dagli Orti

[Less](#)

Subject: PORTRAIT DE WOLFGANG AMADEUS MOZART ENFANT MINIATURES ET ENLUMINURES AUTRICHE VIENNE WIEN MUSEUM KARLSPLATZ COMPOSITEUR XVIIIEME SIECLE XVIII SIECLE 18EME SIECLE AGES DE LA VIE AGE A MI CORPS HABIT COSTUME D EPOQUE GARCON ENFANT ANONYME PORTRAIT D ENFANT PORTRAIT SIECLE GENRE ICONOGRAPHIQUE THEMATIQUE PORTRAIT CADRE PORTRAIT SUJET COSTUME EPOQUE MODERNE ECRITURE AGE DE LA VIE COSTUME TYPE DE VETEMENTS PORTRAIT DE GARCON MOZART DIT WOLFGANG AMADEUS MOZART 1756 1791 ECRITURE SUPPORT PORTRAIT A MI CORPS LIVRE PERIODE MODERNE PEINTURE TECHNIQUE MUSICIEN COMPOSITEUR PERSONNALITE MUSIQUE COIFFURE HABILLEMENT ENFANCE 18E SIECLE VIE INTELLECTUELLE ET SCIENTIFIQUE DESCRIPTION ICONOGRAPHIQUE PERRUQUE MINIATURE PEINTURE TECHNIQUE TECHNIQUE

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Léopold Mozart (1719-1787),
père de Mozart



Le jeune Mozart

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Matches for: wolfgang mozart

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Portrait de Wolfg

Creator: Anonyme ,

Description: miniature (peinture)

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Language: fr

Source: Autriche, Vienne, Wien

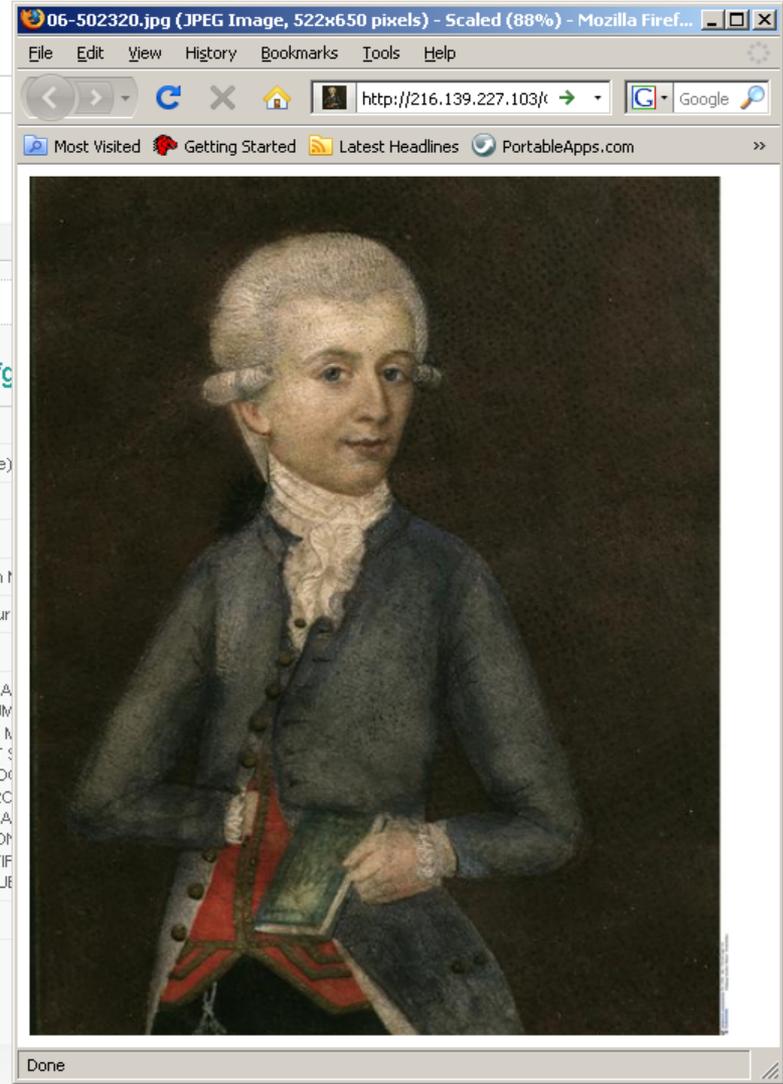
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Subject: PORTRAIT DE WOLFGANG MOZART
AUTRICHE VIENNE WIEN MUSEUM
SIECLE AGES DE LA VIE AGE A M
PORTRAIT D ENFANT PORTRAIT S
PORTRAIT SUJET COSTUME EPOC
VETEMENTS PORTRAIT DE GARC
ECRITURE SUPPORT PORTRAIT A
MUSICIEN COMPOSITEUR PERSON
VIE INTELLECTUELLE ET SCIENTIF
PEINTURE TECHNIQUE TECHNIQUE

Date: 0

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Cote cliché :
N° d'inventaire :
Titre :
Auteur :
Crédit photographique :
/ Alfredo Dagli Orti
Période :
Technique/Matière :

06-502320
Fonds : Miniatures et enluminures
Portrait de Wolfgang Amadeus Mozart (enfant)
Anonyme
Diffusion uniquement sur le territoire français. (C) BPK, Berlin, Dist RMN
18e siècle
miniature (peinture)



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Le jeune Mozart

Anonyme ,
Culture.fr/collections



Léopold Mozart (1719-1787...

Anonyme ,
Culture.fr/collections



Le jeune Mozart

Cignaroli Felice (1726-1796) ,
Culture.fr/collections



Anne-Marie Mozart (1720-1...

Anonyme ,
Culture.fr/collections



Wolfgang Amadeus Mozart

Anonyme ,
1786
Culture.fr/collections



Wolfgang Amadeus Mozart

Anonyme ,
Culture.fr/collections



Mozart décoré de l'ordre ...

Anonyme ,
1777
Culture.fr/collections



Lettre de Mozart à son père...

Mozart Wolfgang Amadeus
(1756-1791) Compositeur
autrichien,
1783
Culture.fr/collections



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Matches for: wolfgang mozart

Item details

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Le jeune Mozart

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Thought lab

Europeana.eu is a collaboration between universities, research institutes and content providers. The site is a prototype, and in the coming year we will be developing it in response to users' feedback and making it operational.

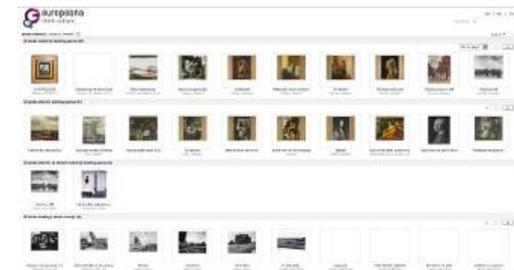
We will demonstrate new technologies and ideas here in Thought lab. Because these are experiments, some of the technologies don't necessarily comply with accessibility standards yet.



Semantic Search Lab

A research prototype of a semantic search engine for [Europeana](#). As this is work in progress, multilingual support is still limited. The prototype's interface is currently only available in English, French and Dutch. The search engine contains data of the [Rijksmuseum Amsterdam](#), the [Musée du Louvre](#) in Paris, and the [Rijksbureau voor Kunsthistorische Documentatie \(Netherlands Institute for Art History\)](#) in The Hague. These data are for demonstration purposes only; some data might be outdated and there is no claim of completeness..

[see the prototype](#)





This is a [research prototype](#) of Europeana's semantic search engine.
Enter a search term, for example: [Egypt](#), [Rembrandt](#), [window](#).

jan vid

artefact [view all 4 results](#)

- Portret van Jan van Nes (1631-16...
- Jan Hendrik van Kinsbergen (1735...
- Jan van Wassenaer (1483 - 1523),...

person [view all 8 results](#)

- Victors, Jan**
- [Jan VICTORS](#)
- [Jan VICTORS](#)


[Louvre](#)
11,327 artworks

46,038 artworks 82,781 artworks



artefact related to keyword: "jan victors" ✕

group by ▼ view ▼

works created by matching person (39)

[view all](#)

Go to page 1 < >



Isaac bénissant Jacob
Jan VICTORS

Jeune fille à la fenêtre
Jan VICTORS

http://e-
Victors, Jan

Portret van pofessor
Victors, Jan

Volksmuzikanten in een
Victors, Jan

Veerpont bij aanlegplaats
Victors, Jan

Hanna, de moeder van
Victors, Jan

works related to matching person (21)

[view all](#)

○ ○ ○ < >



Jozeft vertelt zijn dromen
Maes, Nicolaes

http://e-
Anoniem

Socrates begoten door
Blommendael, Reyer
Jacobsz. van

Landschap met herders en

Hoenderhof
Boel, Peeter

Christus aan het kruis met

Gelijkenis van de arbeiders
Pierson, Christoffel

works created by a teacher of matching person (100)

[view all](#)

Go to page 1 < >



Zelfportret met pet
Rembrandt Harmensz. van
Rijn

Zelfportret naar voren
Rembrandt Harmensz. van
Rijn

Zelfportret met muts en
Vliet, Jan Gillisz. van

Zelfportret met hoed met
Rembrandt Harmensz. van
Rijn

Zelfportret met lange,
Rembrandt Harmensz. van
Rijn

rma:Zelfportret met gefronst voorhoofd: buste - rma:prentmaker - rma:Rembrandt Harmensz. van Rijn - skos:exact match - ulan:Rembrandt van Rijn - owl:sameAs - rkd_artists:Rembrandt Harmensz. van Rijn - rkd_artists:Teacher of - rkd_artists:Victoor, Jan - rkd_artists:Preferred name - "Victors, Jan"
Zelfportret met lange,
Zelfportret met gefronst

works showing a teacher of matching person (9)

[view all](#)

artefact related to keyword: "jan victors" ✕

works created by matching person (39)

view all

Go to page 1 < >


 Isaac bénissant Jacob
Jan VICTORS

 Jeune fille à la fenêtre
Jan VICTORS


local view

✕

Jeune fille à la fenêtre

<http://e-culture.multimedien.nl/ns/louvre/works/13834>


Motif illusionniste typiquement rembranesque - et promis à un bel avenir - d'une figure (souvent féminine) vue à travers une ouverture feinte (fenêtre-niche ou porte) : Rembrandt (voir son tableau de Dulwich, de 1645) en fait bien sûr usage mais aussi Bol, Dou, Maes, S. Koninck, Hoogstraten, etc. Victors reste l'un des premiers en date à l'avoir utilisé et ce, avec une finesse et une délicatesse picturales remarquables.

Property	Value
<u>Creator</u>	Jan VICTORS; Jan VICTORS
<u>Date</u>	1640
<u>Location</u>	France; Ile-de-France; Paris; 2 e étage; Hollande, XVIIe siècle; Peintures; Richelieu; Salle 32
<u>Style/Period</u>	Hollande
<u>Subject</u>	accoudé; bijou; coiffure; de trois-quarts; fenêtre; jeune fille; portrait d'inconnu; robe; à mi-corps; peintures
<u>Technique</u>	toile
<u>Title</u>	Jeune fille à la fenêtre
<u>Type</u>	peinture; tableau; Département des Peintures

links

- [original page](#)
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- [annotate](#)

works related to matching person (21)

view all


 Jozef vertelt zijn dromen
Maes, Nicolaes

<http://e-culture.multimedien.nl/ns/louvre/works/13834>
Anoniem

 Socrate
Blommestein, Ja

works created by a teacher of matching person (100)

view all


 Zelfportret met pet
Rembrandt Harmensz. van Rijn

 Zelfportret naar voren
Rembrandt Harmensz. van Rijn

 Zelfpor
Vliet, v

works showing a teacher of matching person (9)

view all

Jeune fille à la fenêtre

<http://e-culture.multimedien.nl/ns/louvre/works/13834>



Motif illusionniste typiquement rembranesque - et promis à un bel avenir - d'une figure (souvent féminine) vue à travers une ouverture feinte (fenêtre-niche ou porte) : Rembrandt (voir son tableau de Dulwich, de 1645) en fait bien sûr usage mais aussi Bol, Dou, Maes, S. Koninck, Hoogstraten, etc. Victors reste l'un des premiers en date à l'avoir utilisé et ce, avec une finesse et une délicatesse picturales remarquables.

Property	Value	Source
Creator	<ul style="list-style-type: none">Jan VICTORS	<ul style="list-style-type: none">louvre.joconde.works.creators.rdf
Object type	<ul style="list-style-type: none">tableau	<ul style="list-style-type: none">louvre.joconde.works.annotations.rdf
Domain	<ul style="list-style-type: none">peinture	<ul style="list-style-type: none">louvre.joconde.works.annotations.rdf
Style/Period	<ul style="list-style-type: none">Hollande	<ul style="list-style-type: none">louvre.joconde.works.places.rdf
Current location	<ul style="list-style-type: none">FranceIle-de-FranceParis	<ul style="list-style-type: none">louvre.joconde.works.places.rdf
Depicted subject	<ul style="list-style-type: none">accoudébijoucoiffurede trois-quartsfenêtrejeune filleportrait d'inconnurobeà mi-corps	<ul style="list-style-type: none">louvre.joconde.works.annotations.rdf
Technique	<ul style="list-style-type: none">toile	<ul style="list-style-type: none">louvre.joconde.works.annotations.rdf
Catalog number	<ul style="list-style-type: none">INV 1286	<ul style="list-style-type: none">louvre.works.rdf
aile	<ul style="list-style-type: none">Richelieu	<ul style="list-style-type: none">louvre.works.rdf
auteur	<ul style="list-style-type: none">Jan VICTORS	<ul style="list-style-type: none">louvre.works.creators.rdf
categorie	<ul style="list-style-type: none">peintures	<ul style="list-style-type: none">louvre.works.subjects.rdf
date	<ul style="list-style-type: none">1640	<ul style="list-style-type: none">louvre.works.rdf
dimension	<ul style="list-style-type: none">H. : 0,93 m. ;L. : 0,78 m.	<ul style="list-style-type: none">louvre.works.rdf
lbcourt	<ul style="list-style-type: none">Peintures	<ul style="list-style-type: none">louvre.works.rdf
lblong	<ul style="list-style-type: none">Département des Peintures	<ul style="list-style-type: none">louvre.works.rdf

links

- [original page](#)
- [full view](#)
- [annotate](#)

Réponse n° 1



Domaine	peinture
Type d'objet	tableau
Auteur / Exécutant	VICTORS Jan
Précision auteur	Amsterdam, 1620 ; Indes Néerlandaises, 1676
Ecole	Hollande
Titre	JEUNE FILLE A LA FENETRE
Période	2e quart 17e siècle
Millésime	1640
Matériaux / Techniques	peinture à l'huile ; toile
Dimensions	93 H ; 78 L
Inscription	daté ; signé
Précision inscription	JAN FICTOOR.FE 1640
Sujet représenté	portrait d'inconnu (jeune fille, à mi-corps, de trois-quarts, accoudé, robe, bijou, coiffure) ; fenêtre
Lieu de conservation	Paris ; musée du Louvre département des Peintures
	<i>Musée de France</i> <i>au sens de la loi n°2002-5 du 4 janvier 2002</i>
Statut juridique	propriété de l'Etat ; achat en vente publique ; musée du Louvre département des Peintures
Date acquisition	1801
Anciennes appartenances	Paillet (vente Paillet, 1801/08/27, cat. n° 50) ; Coclers (vente Coclers, 1801/08/27, cat. n° 50)
N° inventaire	INV 1286
Genèse	reproduit en gravure
Historique	gravure datée 1808
Bibliographie	VILLOT II 169 ; DEMONTS 2371, P. 122 ; C.S.I. 1, P. 146
Copyright notice	© Musée du Louvre, © Direction des Musées de France, 1999
Droits photo	© Schormans ; © Victors ; Réunion des musées nationaux
	Commande reproduction et/ou conditions d'utilisation renseignements sur le musée 000PE008668

[Notices](#)

1

[Lots de réponses](#)

Requête

Relations



© Musée du Louvre/A. Dequier - M. Bard

Richelieu
2^e étage
Hollande, XVII^e siècle
Salle 32



Jan VICTORS

Amsterdam, 1620 - Indes néerlandaises, 1676 ou après cette date

Jeune fille à la fenêtre

1640

H. : 0,93 m. ; L. : 0,78 m.

Motif illusionniste typiquement rembranesque - et promis à un bel avenir - d'une figure (souvent féminine) vue à travers une ouverture feinte (fenêtre-niche ou porte) : Rembrandt (voir son tableau de Dulwich, de 1645) en fait bien sûr usage mais aussi Bol, Dou, Maes, S. Koninck, Hoogstraten, etc. Victors reste l'un des premiers en date à l'avoir utilisé et ce, avec une finesse et une délicatesse picturales remarquables.

Acquis dans une vente publique (tableaux apportés de Flandre et de Hollande par Paillet et Coelers), Paris, 1801
Département des Peintures

INV. 1286



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This is a [research prototype](#) of Europeana's semantic search engine.
Enter a search term, for example: [Egypt](#), [Rembrandt](#), [window](#).

search

[Collections](#) [Thesauri](#)



[Rijksmuseum](#)
46,038 artworks



[RKD](#)
82,781 artworks



[Louvre](#)
11,327 artworks

Technical requirements

- Digitised object available on a website at the object level through a permanent direct link
 - To the object and/or the object in context
 - To a thumbnail or a sample
- Metadata at the digitised object level following the metadata elements set defined by Europeana for the general interface
 - Qualified Dublin Core (at the moment only simple DublinCore Indexed and displayed)

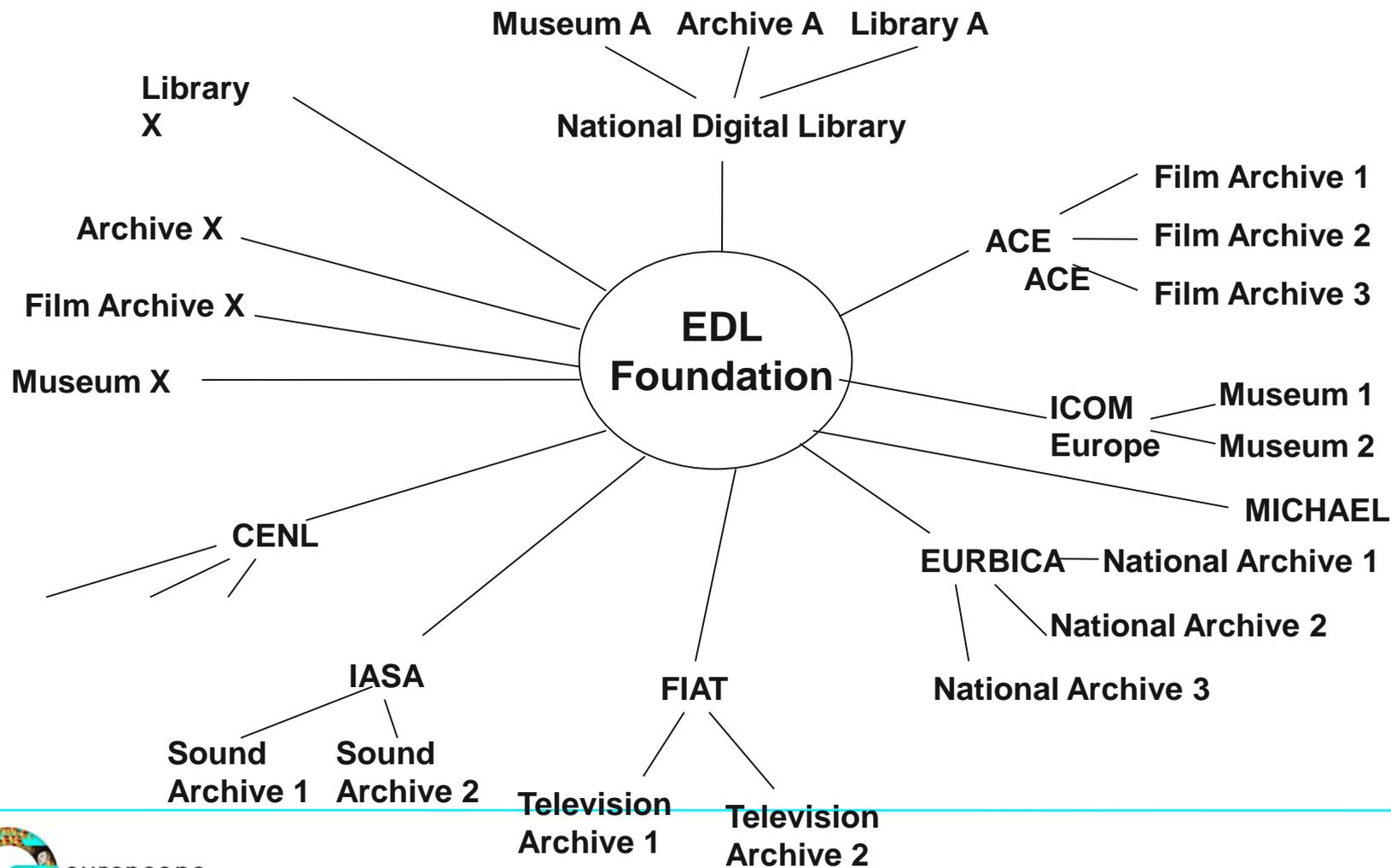
http://dev.europeana.eu/public_documents/Specification_for_metadata_elements_in_the_Europeana_prototype.pdf

- Preferably exposed for harvesting on an OAI PMH server

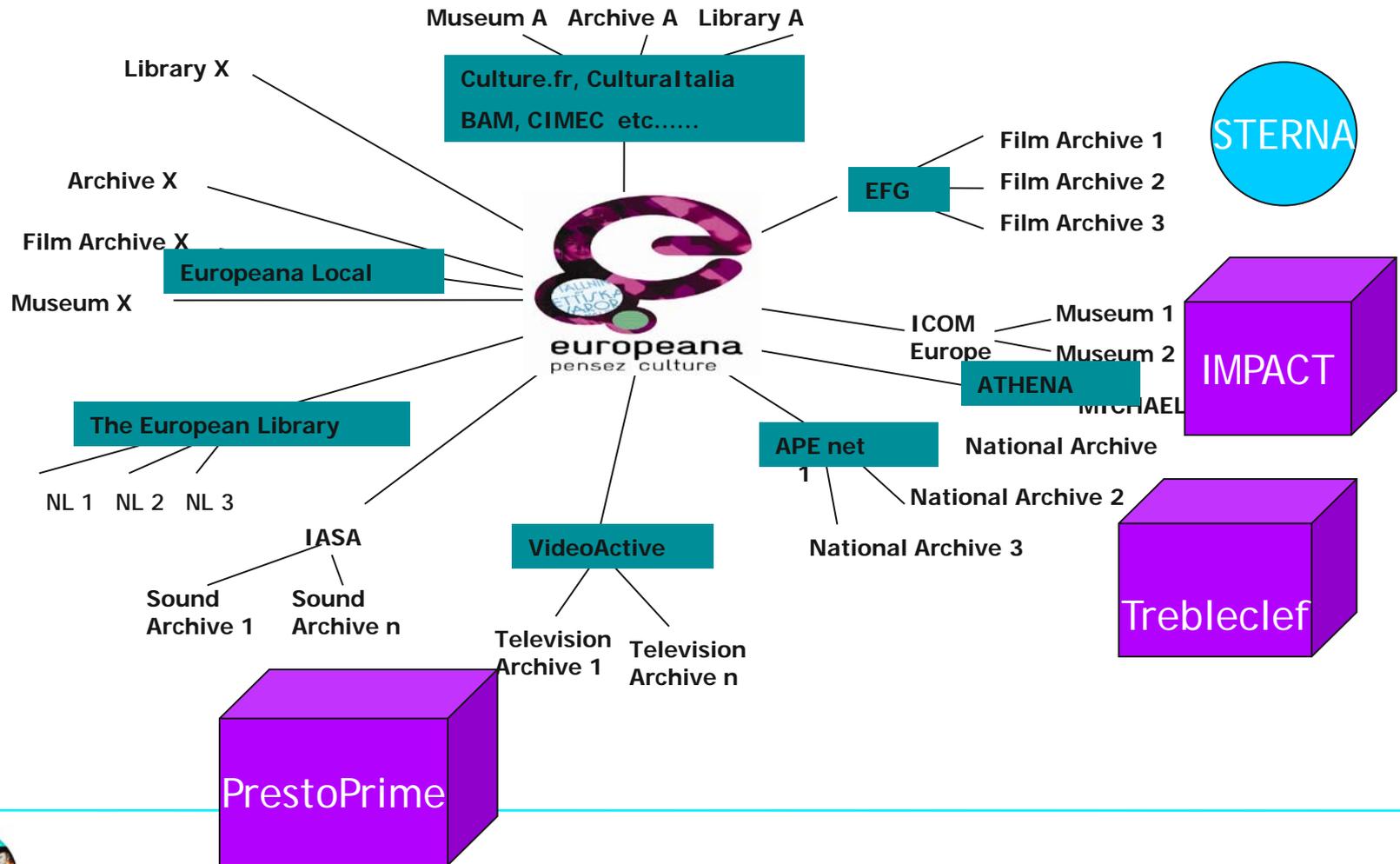
Metadata ingestion

- Metadata in XML from trusted institutions.
 - Harvested OAI PMH, FTP, DVD.
- Transformation into ESE Dublin Core made by the Office that we would like to be done by the providers (already aggregated)
- Set of tools developed that will be made available to partners in the Europeana test environment
 - Analysis tool of the structure received
 - Normalisation generating the additional management data
 - Indexing
- The Thought Lab semantic search engine also demonstrates that full original records are important to prepare the future

EDL Foundation & Europeana want Aggregation



Projects helping the aggregation to date



Current projects

- Europeana Local www.EuropeanaLocal.eu
 - Is an aggregator (**no portal**). Helps local and regional museums, archives, audio visual collections and libraries to bring their content to Europeana.eu.
- EFG www.EuropeanFilmGateway.eu
 - Is a portal. Creates European Film Gateway (a portal) and makes more film accessible to Europeana.
- Athena www.AthenaEurope.org
 - Is an aggregator (**no portal**). Helps museums bring their content to Europeana.eu.
- APEnet
 - Is a portal. Creates European Archives Portal and makes more archives accessible to Europeana.
- PrestoPrime
 - Is a network of excellence for the preservation of audio visual archives and will deliver content to Europeana.
- STERNA
 - Semantic, web based thematic European reference network application building a distributed digital library focussing on natural science, natural history, and biodiversity material.

Forthcoming Projects

- **BHL Europe**

- Improves the interoperability of Europe's biodiversity heritage libraries by introducing common standards and creates a portal to facilitate the search for taxa specific biodiversity information. It will give access to relevant content through Europeana. Begins in 2009

- **EU Screen**

- Will work towards standardisation in the audio visual sector and provide solutions to achieve interoperability in the sector. It will develop long term solutions to rights issues. Is a portal and gives access to the material also through Europeana. Begins September 2009

- **Europeana Travel**

- Overall objective to digitise content on the theme of travel and tourism for Europeana from Europe's national and research libraries. Begins in 2009.

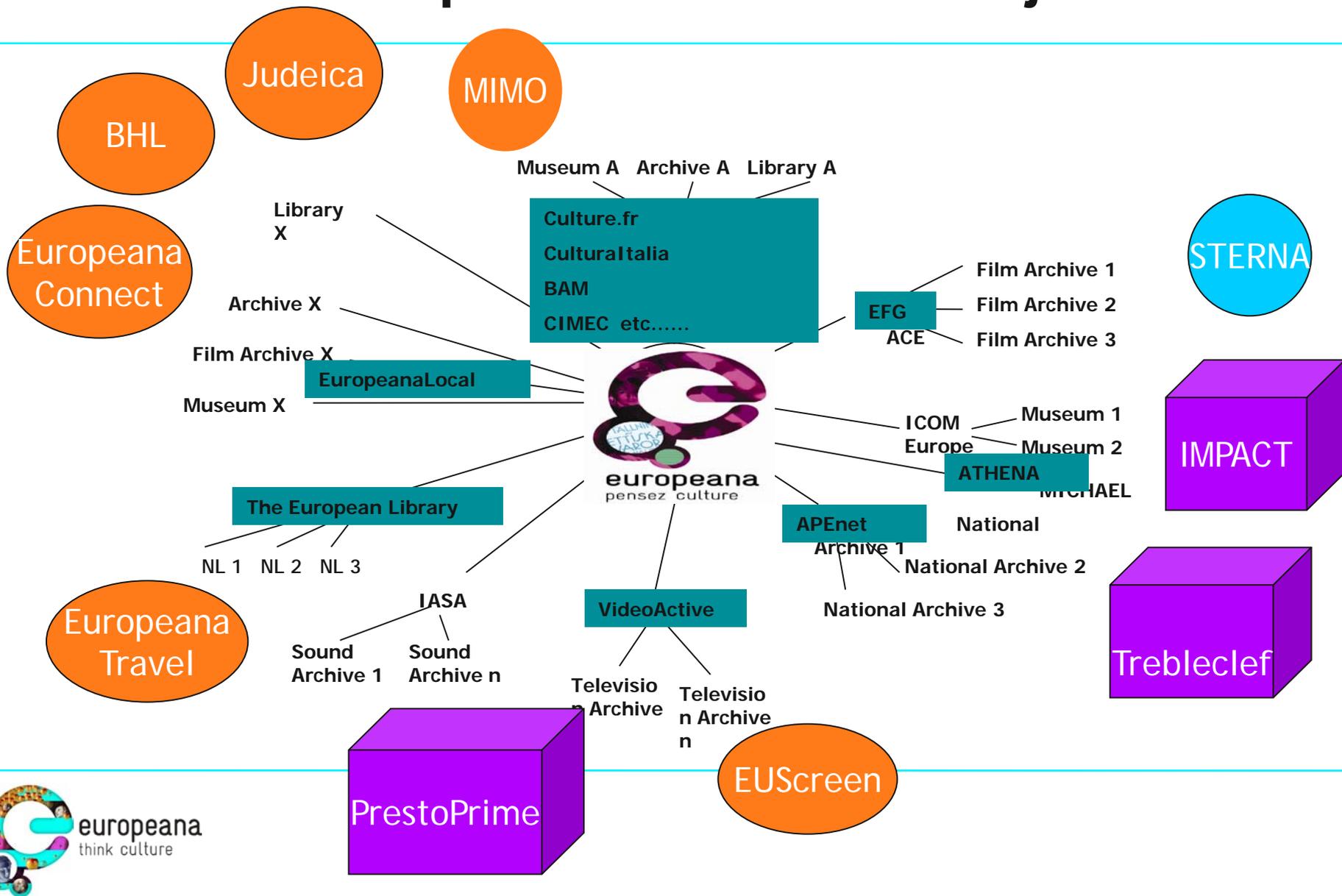
- **MIMO Musical Instrument Museums Online**

- Digitises content and creates a common access portal for musical instruments. MIMO also gives access to its content through Europeana. Begins 2009.

- **JUDEICA Jewish Urban Digital European Integrated Cultural Archive**

- Identifies content in European Institutions demonstrating the jewish contribution to the cities of Europe. Content will be digitised & accessible through Europeana. Begins 2009.

The Europeana Universe of Projects 2009





interoperability is a key issue

- V.Reding (29 September 2005)
 - I am not suggesting that the Commission creates a single library. I envisage a network of many digital libraries – in many different institutions, across Europe



METADATA

OAI-PMH (Header, Metadata, About)

Dublin Core unqualified (occurrence, type, encoding and vocabulary specified)

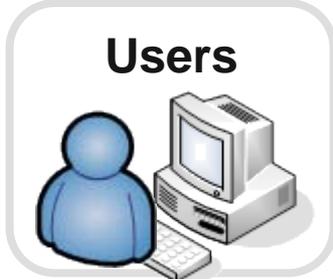
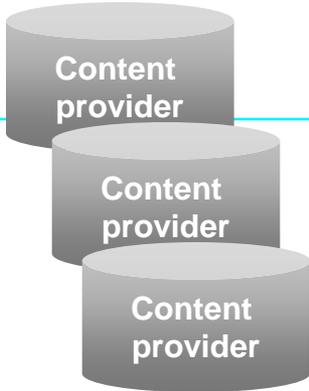
Other formats are optional and a limited number only should be used with the metadataPrefix => used for full text searching

Use of semantic interoperability techniques for semantic mappings and the cross-searching of descriptive metadata **instead of** a higher level interoperability application profile.



STANDARDS

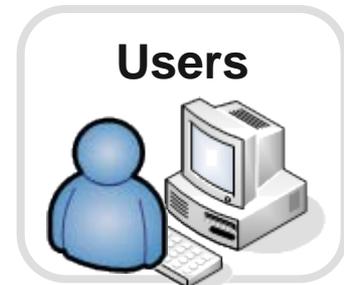
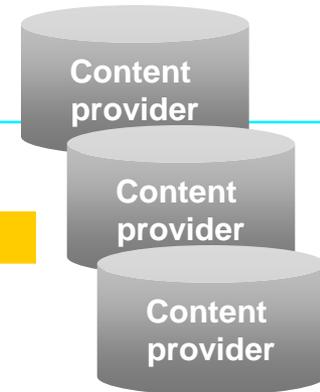
- **OAI-PMH** for harvesting
- **SRU, SOAP, JSR** and **OpenSearch** for external search and access
- **XML** for syntax
- **SKOS, OWL/RDF(S)** for semantics
- **SPARQL** for advanced search (but still discussing alternatives such as SQL, SeQL and Lucene)
- **CIDOC/CRM** and **DCMI Abstract Model Metadata** modelling (**FRBRoo** to be discussed)
- **SAML, LDAP** and **OpenID** for security and authentication
- Lots of others: WSDL, WAI, UNICODE UTF-8, XSLT, NACO, UNAPI, “See-also”, HTTP/HTTPS ...

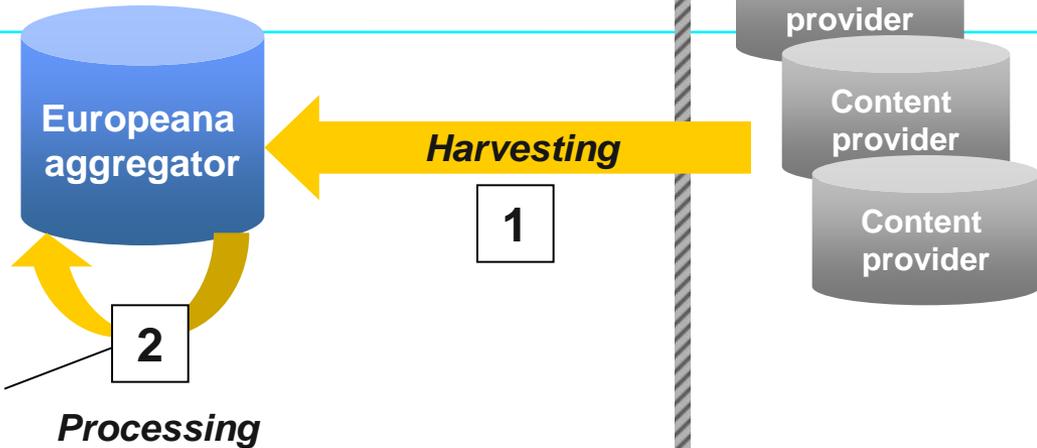




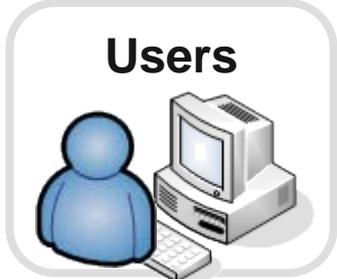
1

*Metadata are harvested via
OAI-PMH*





- **Checking**: quality, errors
- **Mapping**: Syntactic and Semantic interoperability (CIDOC-CRM core?)
- **Pre-processing**: uniform time & location, themes, relations
- **Formatting**: RDF/XML





Transfer

3



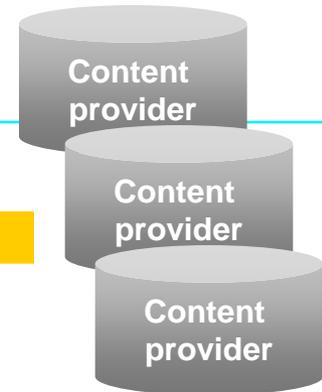
Europeana aggregator

2

Processing

Harvesting

1

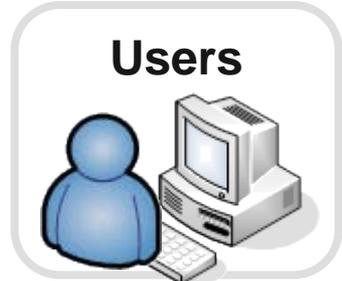


Content provider

Content provider

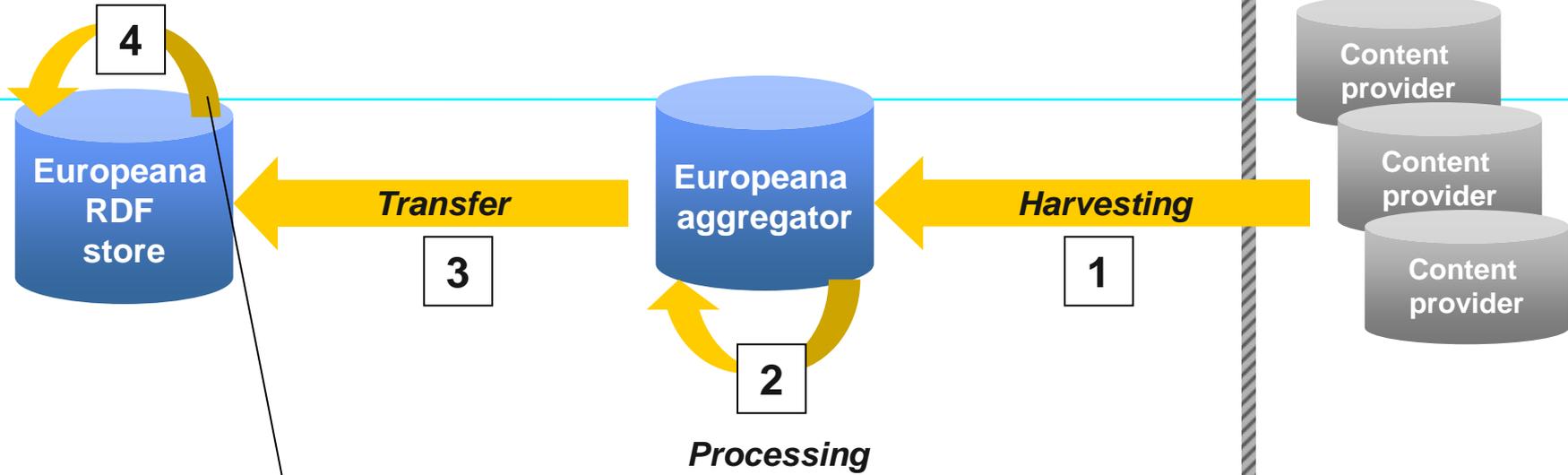
Content provider

Metadata in RDF are transferred to an RDF store



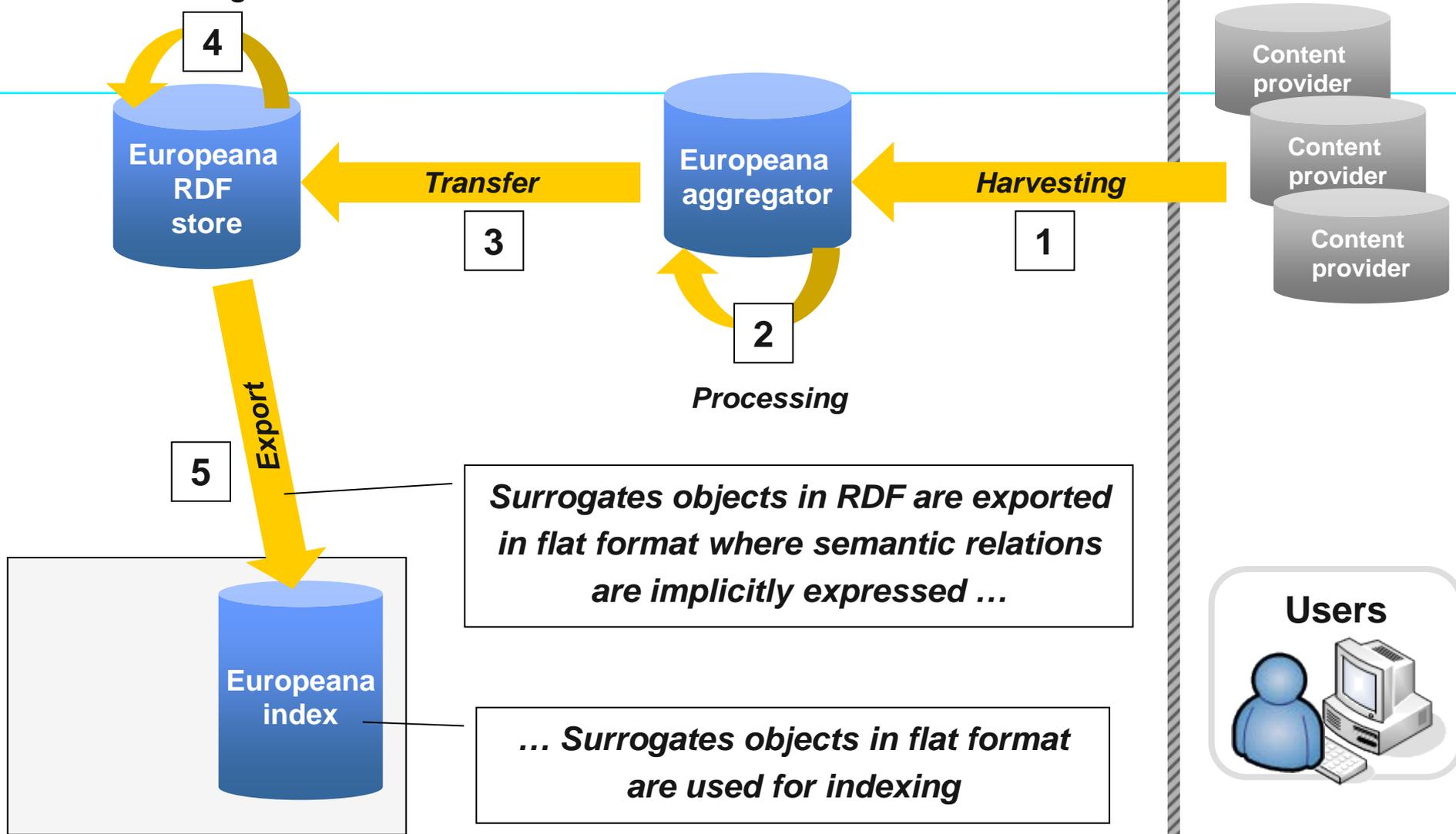
Users

**Surrogates objects
creation & storage**

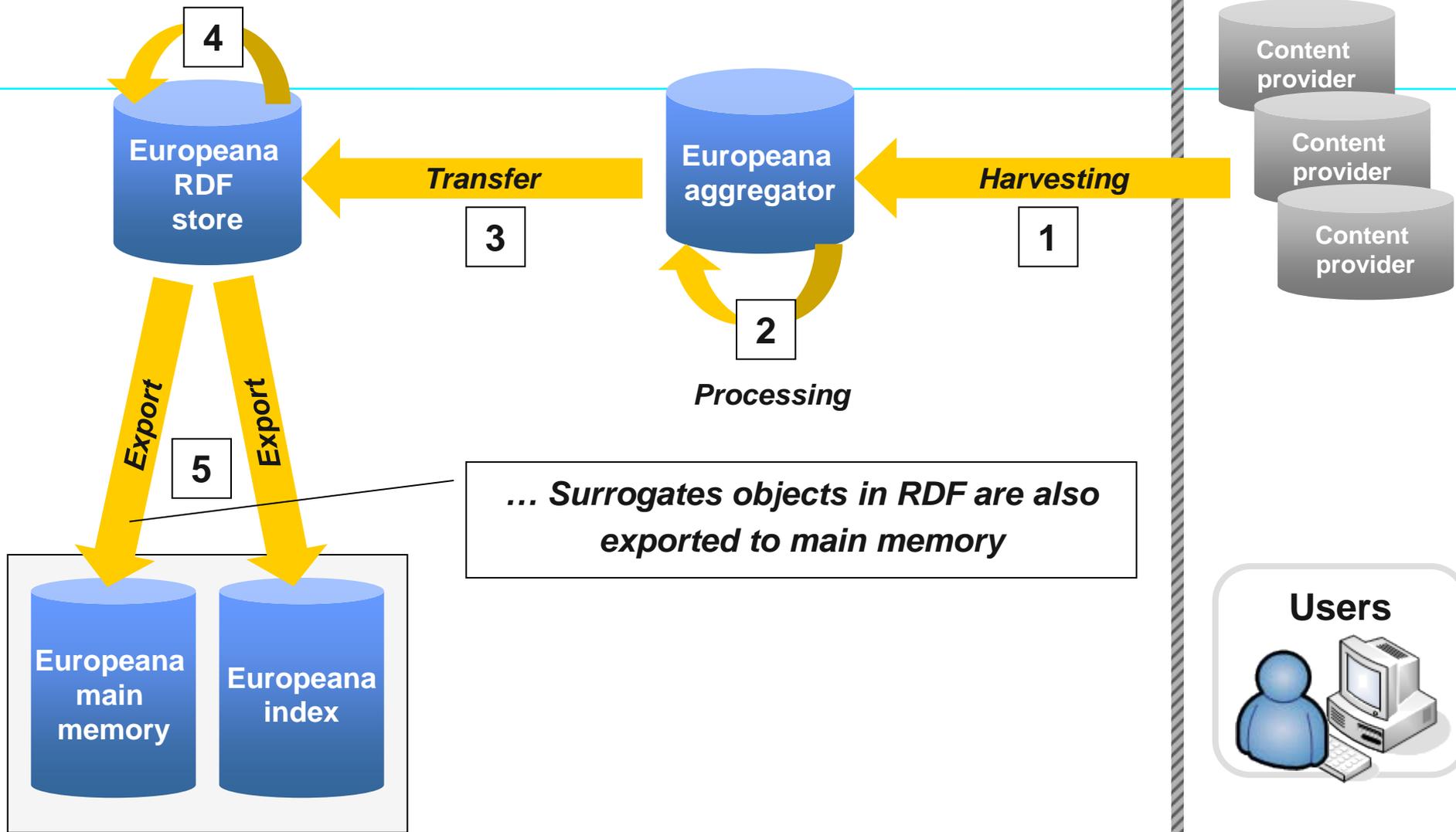


*Metadata are used to create the
Surrogates objects*

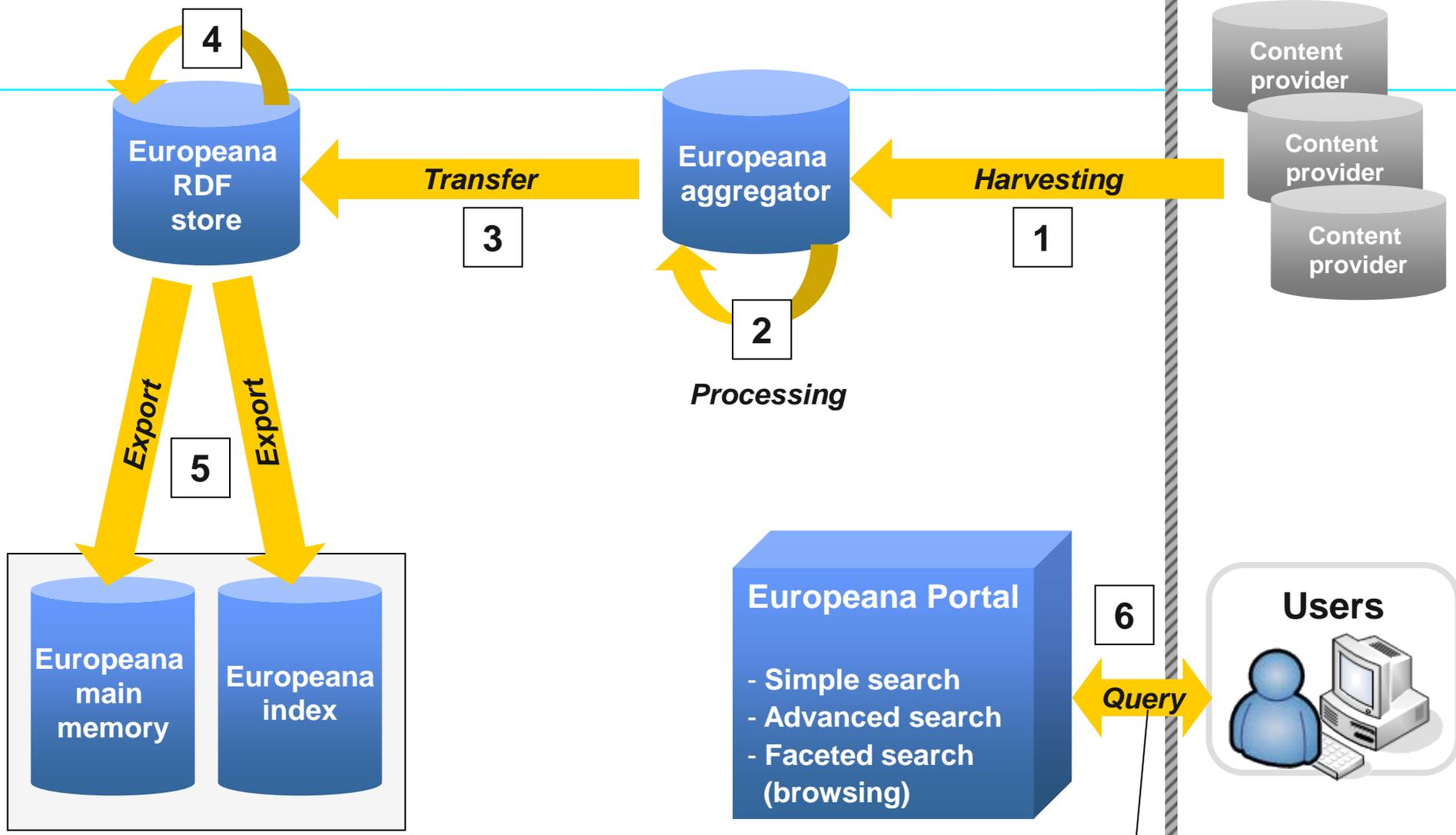
Surrogates objects creation & storage



Surrogates objects creation & storage

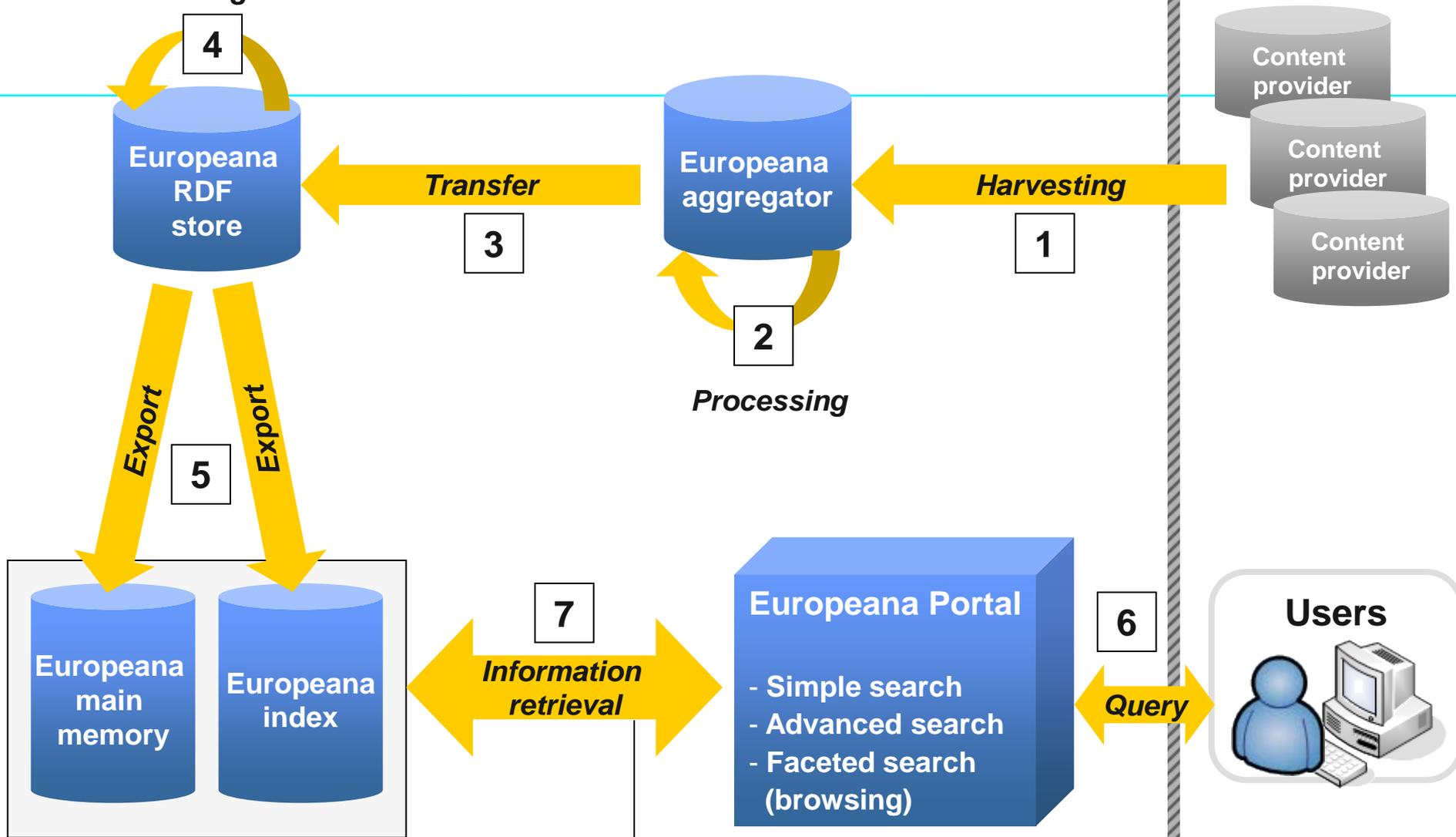


Surrogates objects
creation & storage



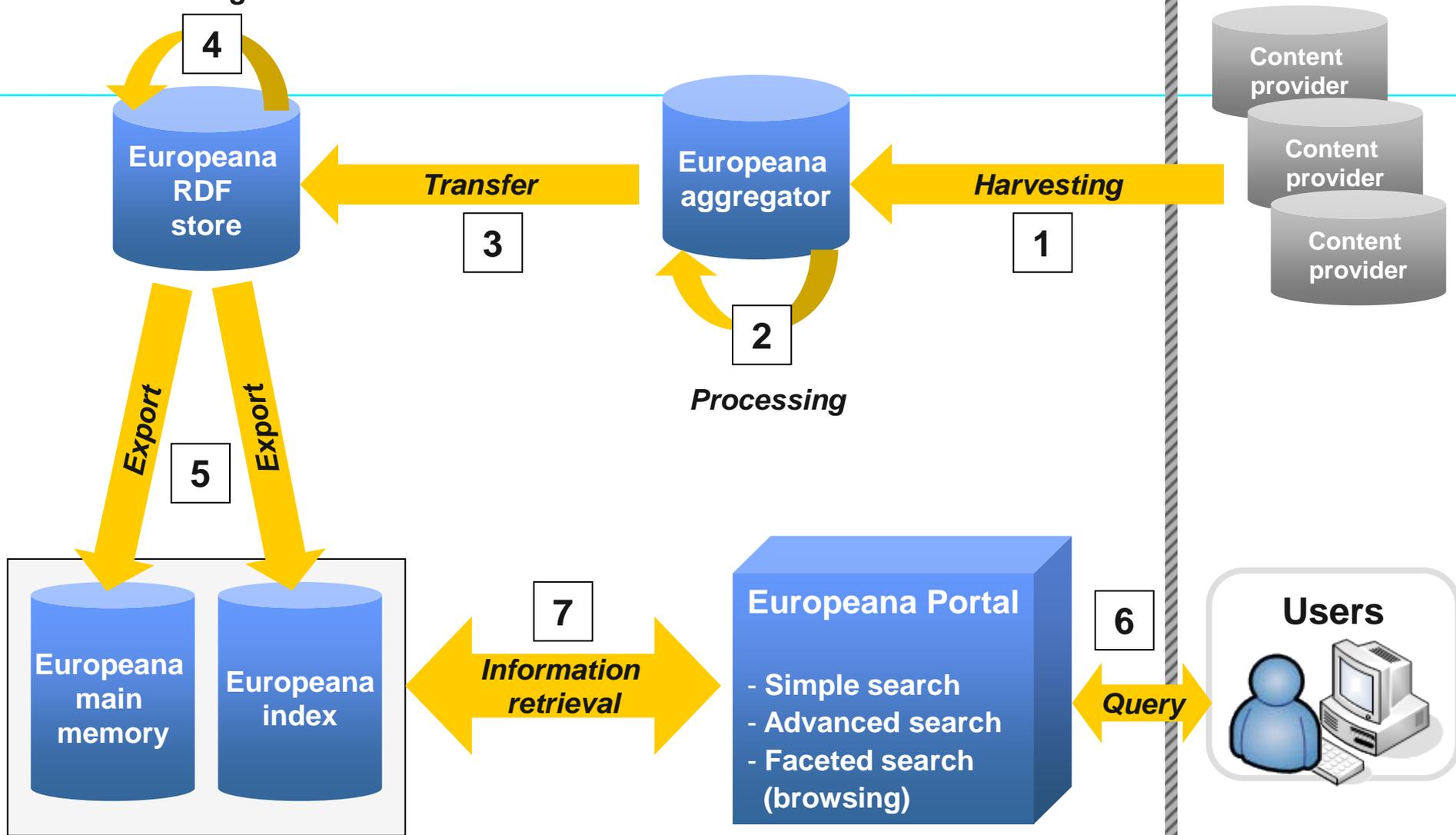
End-users query the Europeana system via the Portal

**Surrogates objects
creation & storage**



- 1) The portal queries the index that returns a list of identifiers ...
- 2) ... used to retrieve the Surrogates from the main memory

**Surrogates objects
creation & storage**



Europeana's Technology

- The Europeana prototype is a proof-of-concept environment to:
 - Validate candidate technologies for the v1.0 release with regards to searching, aligning semantics in a multidimensional content space, cross-lingual and cross-cultural information retrieval
 - Get hands on experience with ingesting and mapping a plethora of: metadata formats, languages, controlled vocabularies, etc.
 - Start building a pan-european network of content aggregators and cultural heritage partners
 - Validate strategies to guarantee future scalability, maintainability, agility and extensibility of the Europeana business model.

Prototype evolution

- Maquette (January 2008)
- Blue design prototype v0.0 'Styx' (June 2008)
 - 500.000 records searchable
 - Release under password protection to network partners
- Salter-Baxter design prototype v0.1 (November 2008)
 - 4.5 million records searchable
 - Official release in Brussel by EU Commission president Barosso
- New production environment release v0.2 (Christmas 2008)
 - Scaled to handle 8000 concurrent users
- MyEuropeana release v0.3 (March 2009)
 - Re-enabled MyEuropeana login user-space environment

Deployment diagram breakdown

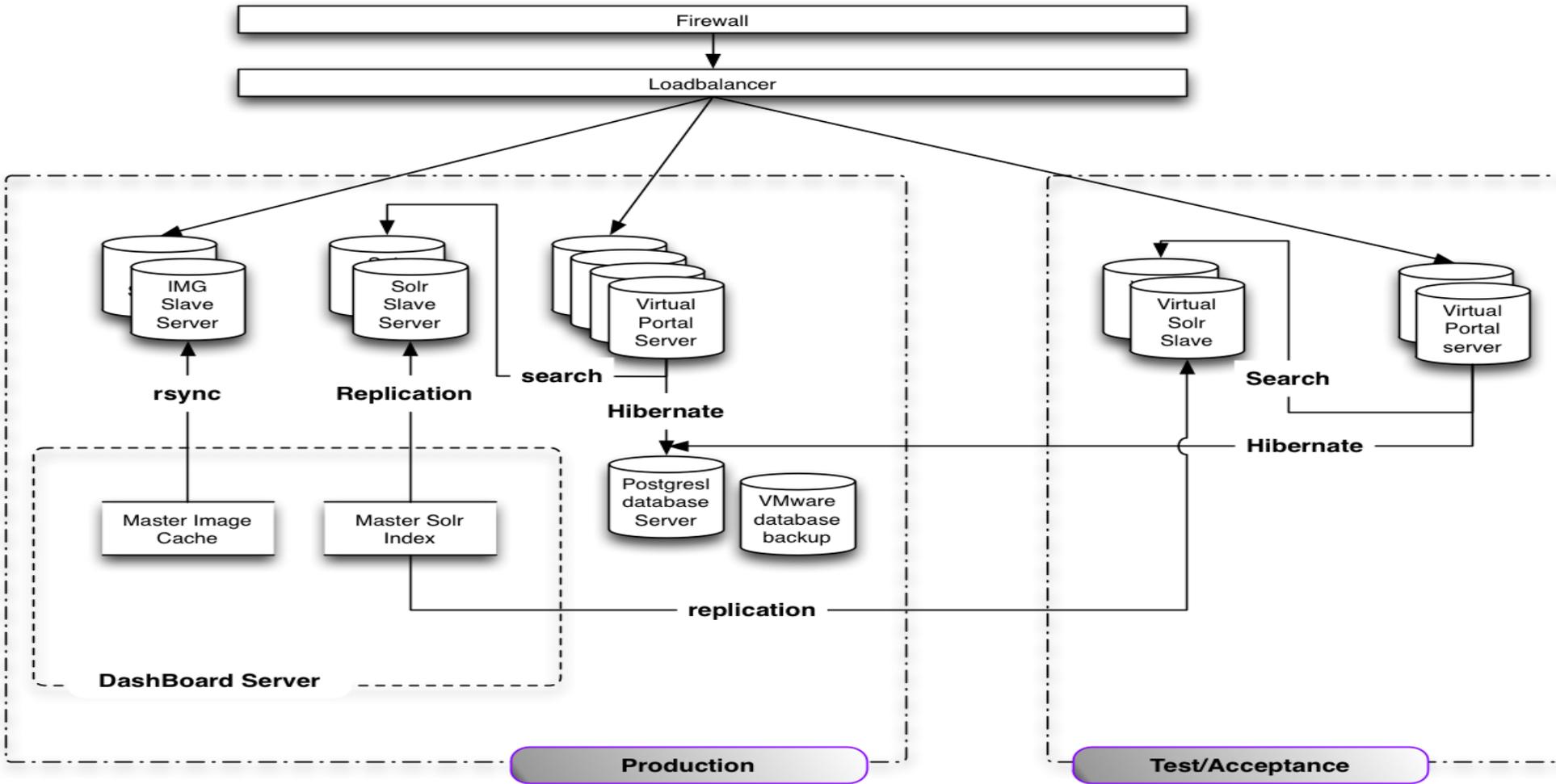


Image Server (1)

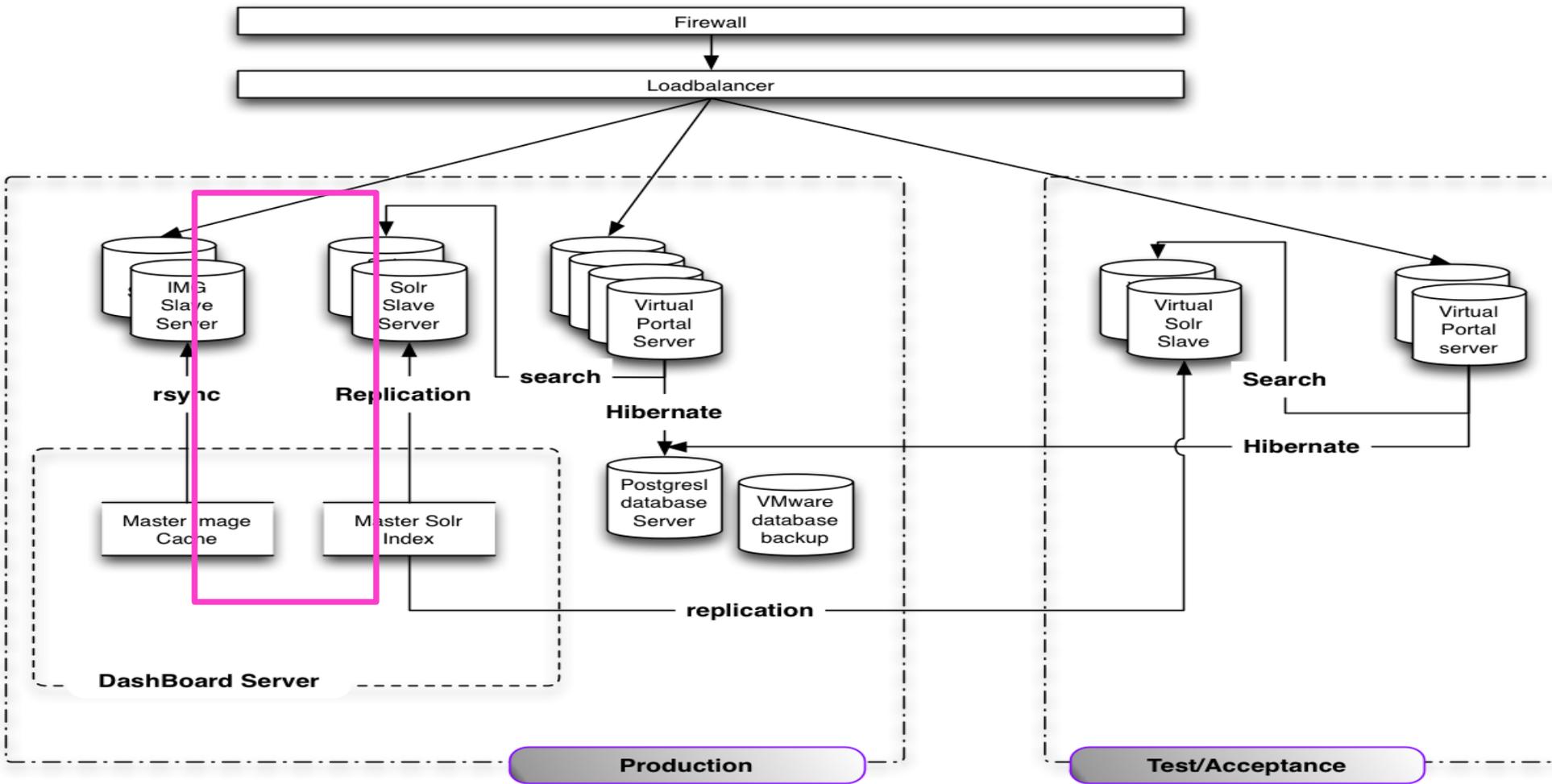
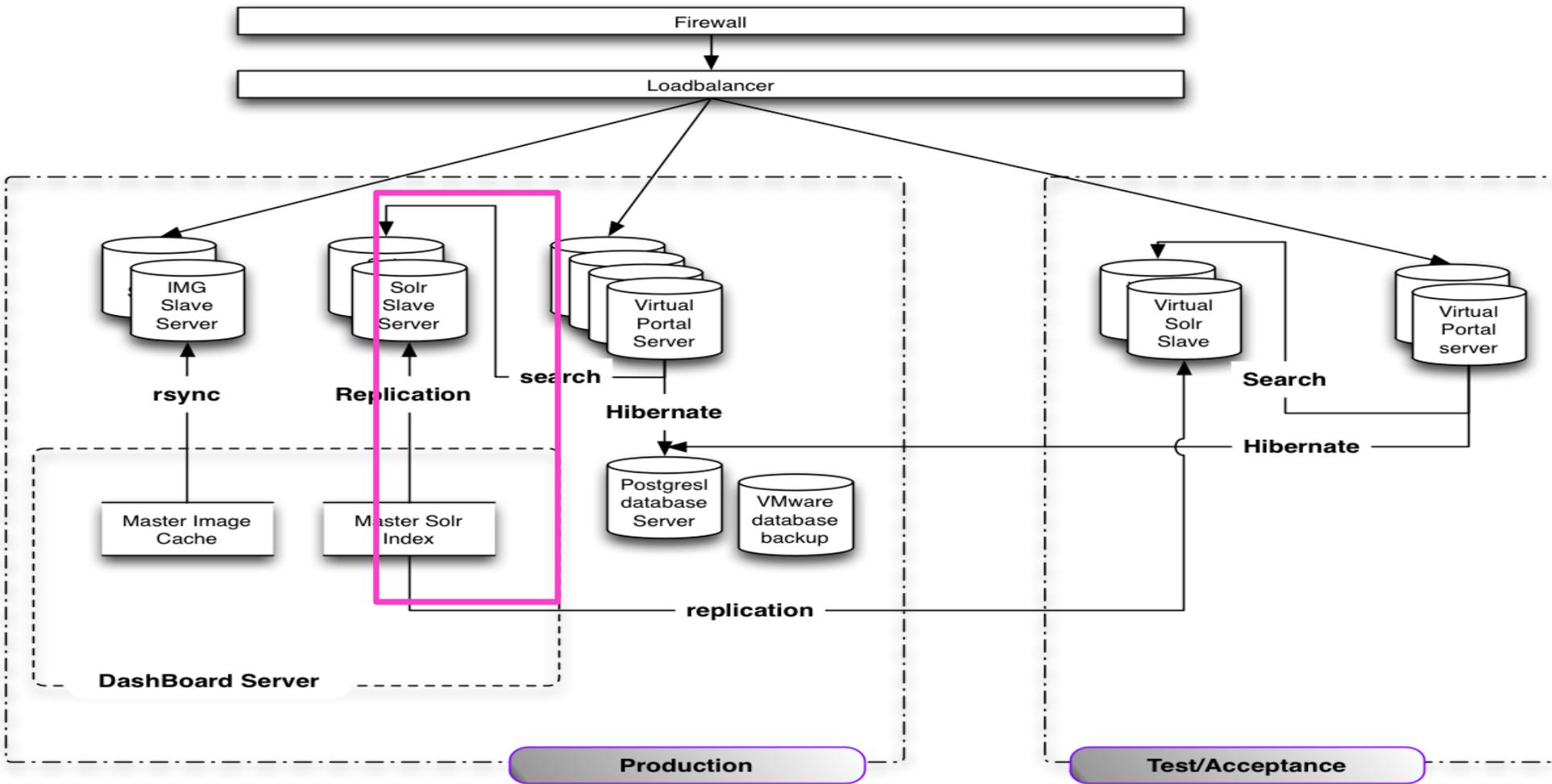


Image Server (2)

- ESE-element '*europaena:object*' uri's are preprocessed using ImageMagick and stored in 4096 folders (=163) as SHA1 hashed strings for very fast retrieval
- Simple cache servlet for retrieval of the object as http-requests from the users' browser
- Replication:
 - Thumbnails are cached on the Dashboard server that function as the 'Image Cache' Master
 - Master 'Image Cache' is synced with production slaves every hour via rsync
- Statistics: served over 75 million images in first 3 months of 2009

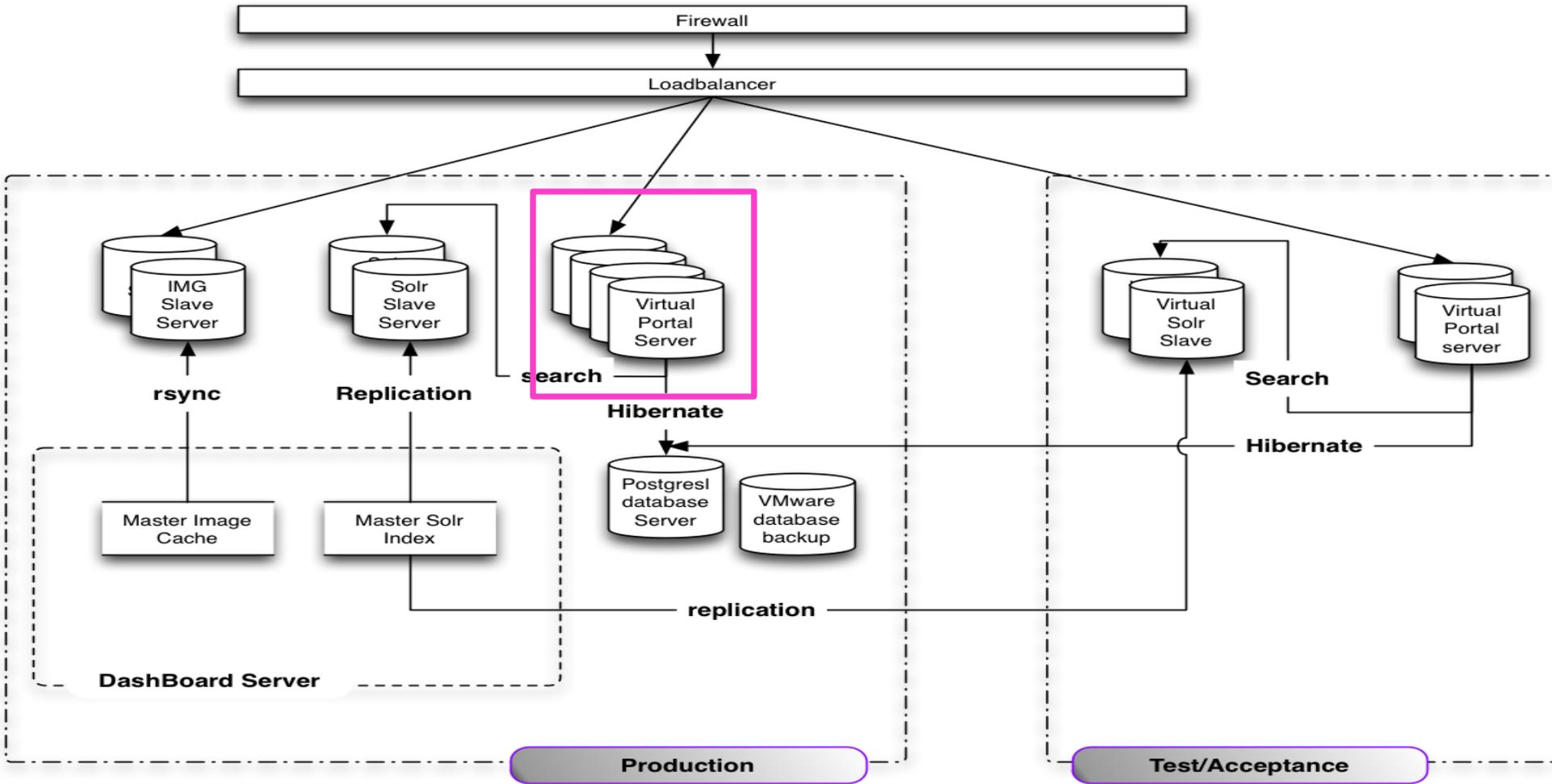
SOLR Search Server (1)



SOLR Search Server (2)

- Apache SOLR v1.3 <http://lucene.apache.org/solr/>
 - REST-based interface for querying and updating the index
 - Build in faceting, related item search, spellchecking 'did you mean', replication, result-caching, multiple output formats
 - Fast and scalable indexing. Know to scale into billions of records
 - Multithreaded indexing. Current single threaded indexing speed ca. 1 million records per hour.
 - v1.4 additions: carrot2 clustering algorithms, autosuggestion, faster numerical range queries (TrieRange Queries) for temporal and spatial querying

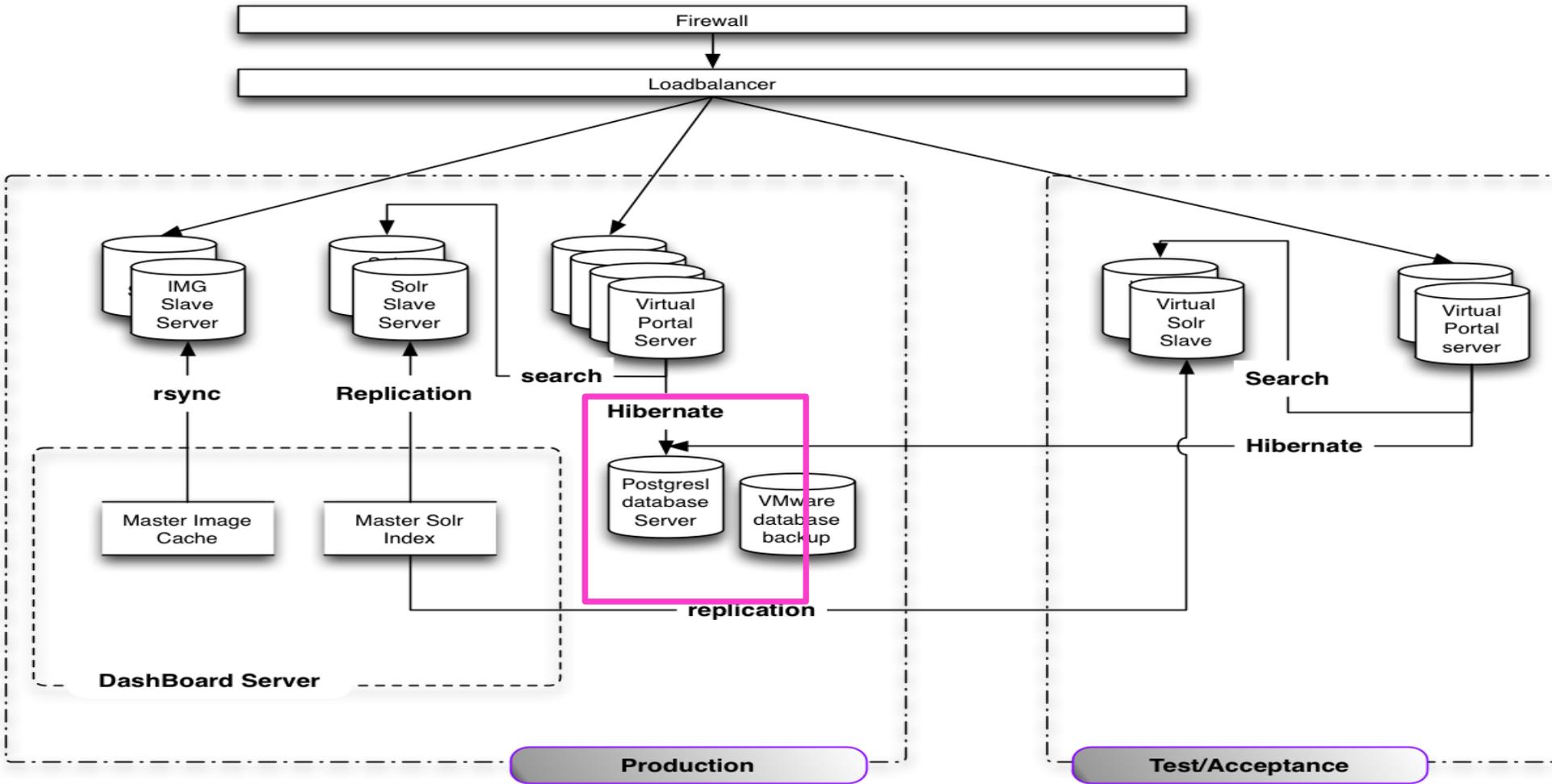
Portal front-end application (1)



Portal front-end application (2)

- Is the main Europeana Graphical User Interface:
 - Dynamically renders the pages
 - Reformulate queries of SOLR
 - Handles user authentication and localisation
- Statistics: served over 13 million pages and processed over 70 million http-request in the first 3 months of 2009

Database Server (1)



Database Server (2)

- PostgreSQL 8.3 database server

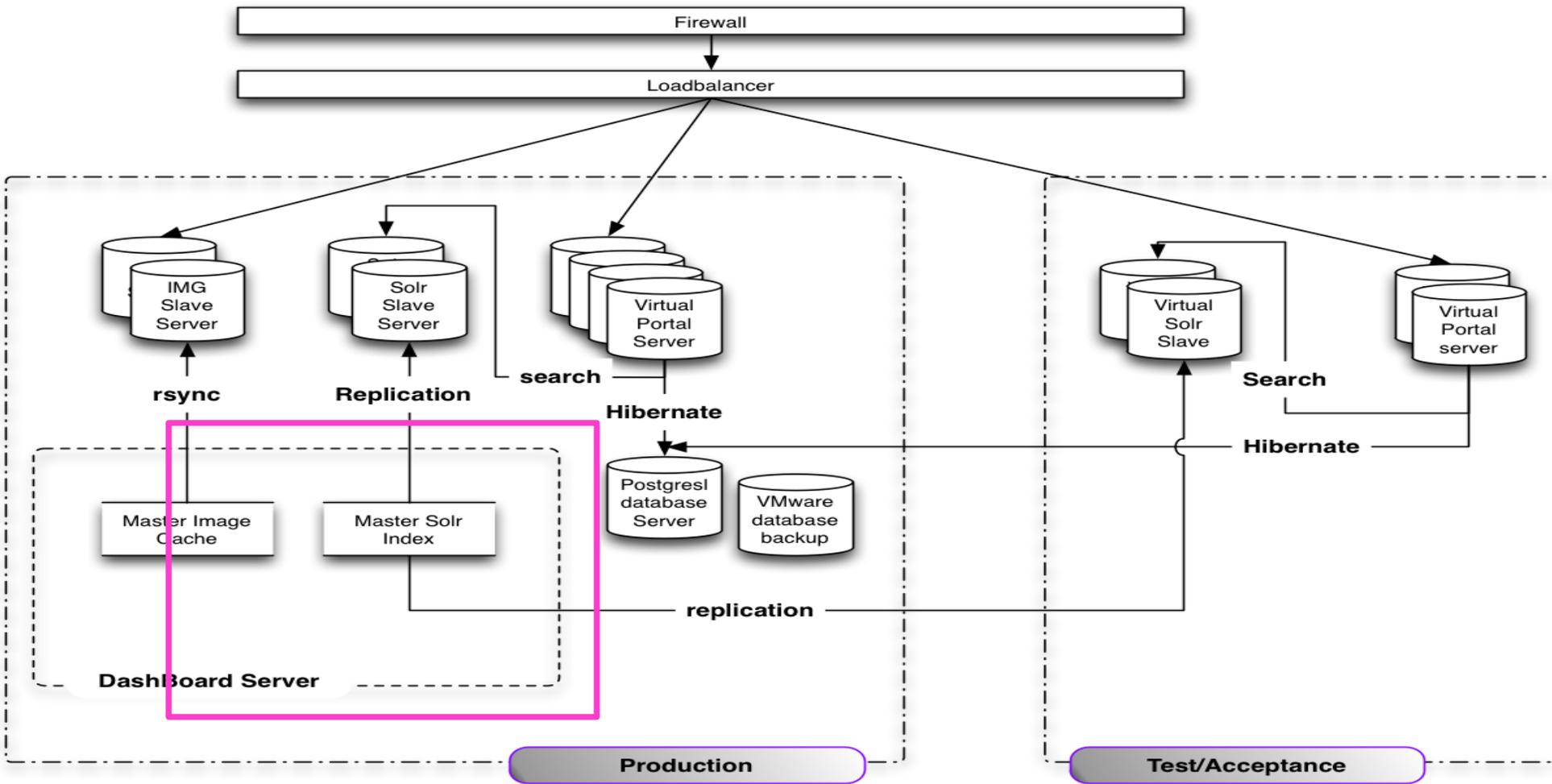
- Contains:

- Europeana records, Europeana Objects, Users, Saved searches/tags/items, interface translations, static pages, content for partner page (i.e. partners and contributors), etc.

- Main usage:

- Datastore for ingested material.
 - Uses europeana object table for caching process
 - Uses european records table for indexing process
 - Dynamically load interface translations and translated static pages (v0.3.1)
 - User validation and management

Dashboard Administration Interface (1)



Dashboard Administration Interface (2)

- Relative new comer to the Europeana prototype space
 - Runs on the Dashboard Server
 - Multi-user and multi-role administrative interface to:
 - Edit user roles
 - Collection management: importing, indexing, caching
 - Edit interface and staticpage translations
 - Manage partner and contributors list
 - Provide content related statistics
 - Future extensions:
 - Ingestion wizard?
 - Upload, analyse, map, normalise, test content in sandbox, etc.

Questions?

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