

ESDC VOSpace-Gaia Integration and services Interoperability

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31/10/2015

Issue/Revision: 1.0

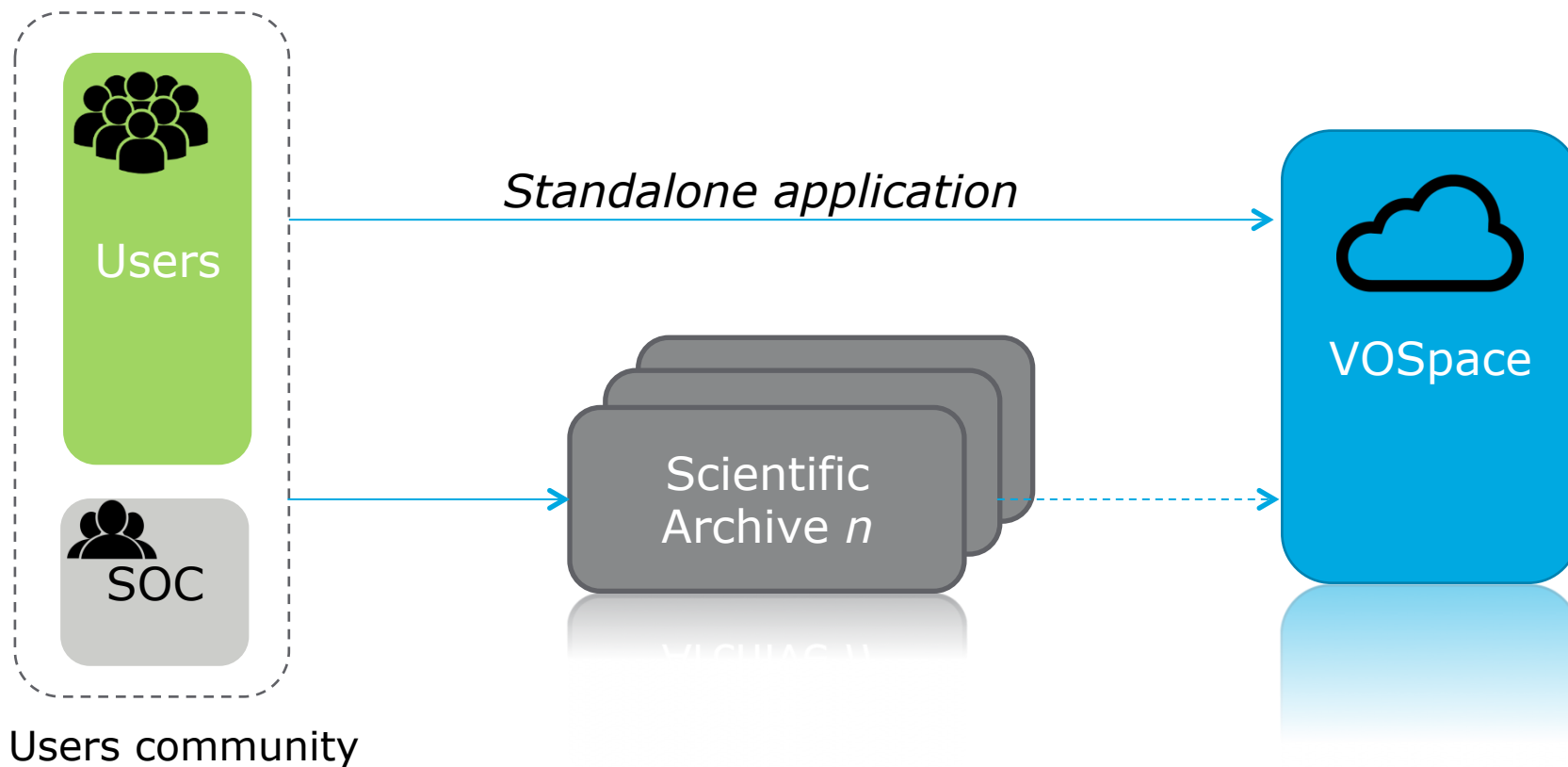
Reference: VOSpace-Gaia Integration

Status: Issued

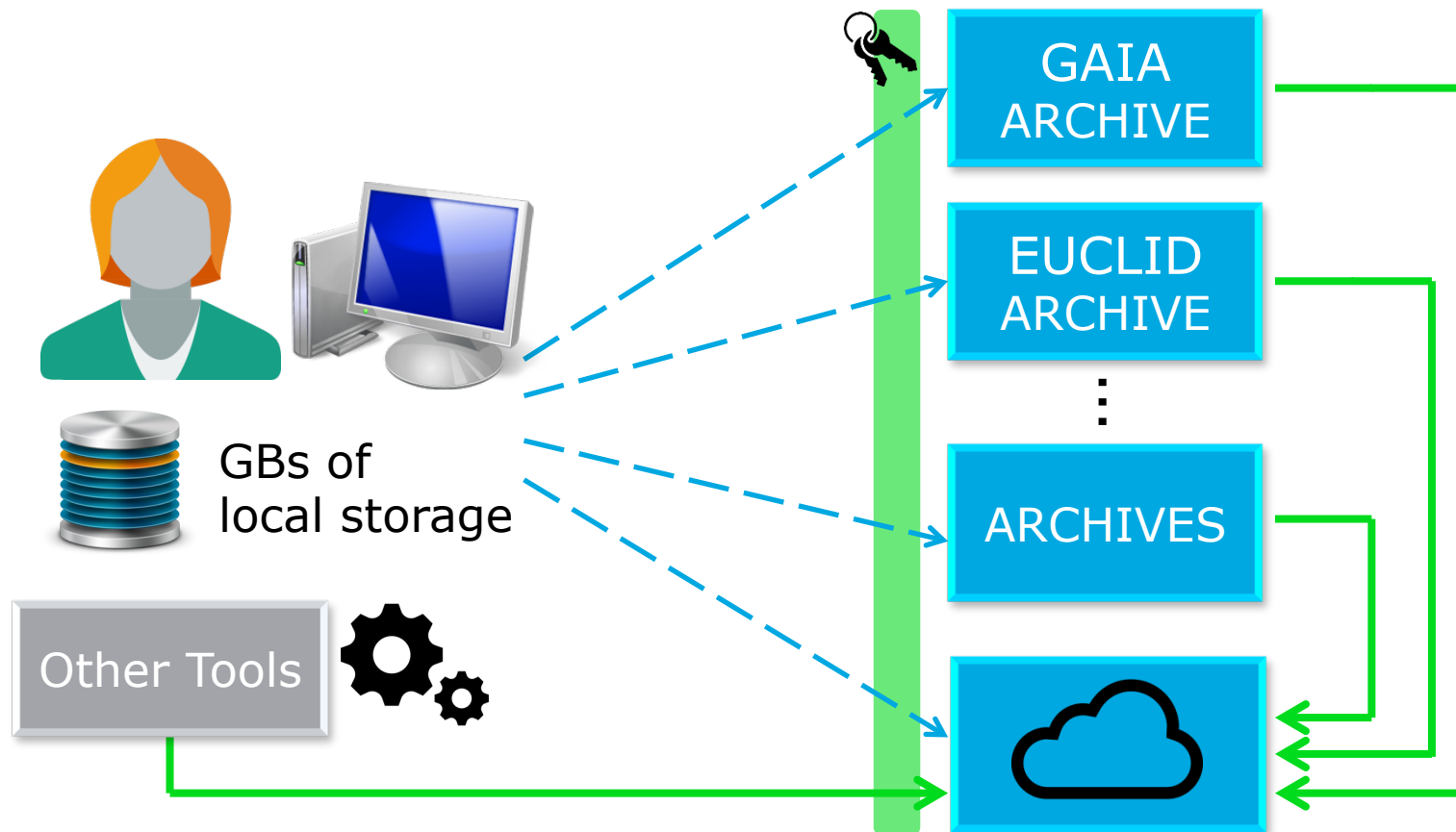
ESA UNCLASSIFIED - Releasable to the Public

- Context
- CAS: Authentication & Authorization
- Interoperability GACS-VOSpace
- Other improvements & future
- Managing multi-accounts

VOSpace role on ESDC



Overall Archives-VOSpace schema



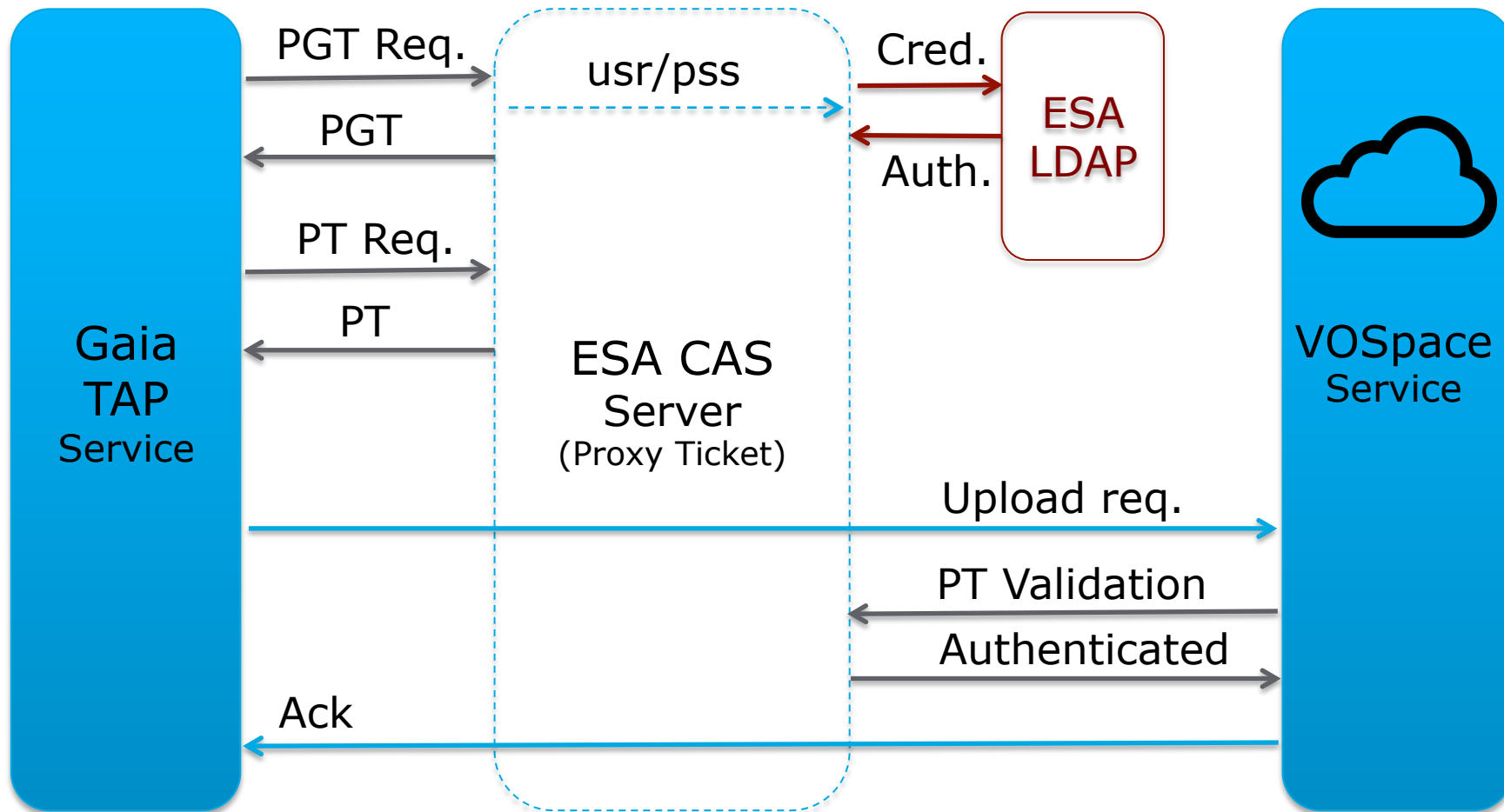
How to access VOSpace



VOSpace Access Points



CAS PT workflow for Gaia Upload



```
<!-- Rest entry point for Apps. Auth with Proxy ticket. -->
<http entry-point-ref="restfulCasEntryPoint" pattern="/rest/**" create-session="stateless" use-expressions="true">
  <headers>
    <frame-options policy="SAMEORIGIN"/>
  </headers>
  <csrf disabled="true"/>
  <custom-filter ref="restfulCasFilter" position="CAS_FILTER" />
</http>
```

```
<!-- Rest entry point for Apps. Auth with Proxy ticket. -->
<beans:bean id="restfulCasEntryPoint"
  class="org.springframework.security.cas.web.CasAuthenticationEntryPoint">
  <beans:property name="loginUrl" value="@cas.server.url@/@service@" />
  <beans:property name="serviceProperties" ref="serviceProperties" />
</beans:bean>
```

```
<beans:bean id="restfulCasFilter"
  class="org.springframework.security.cas.web.CasAuthenticationFilter">
  <beans:property name="authenticationManager" ref="authenticationManager" />
  <!-- Proxy ticket -->
  <beans:property name="proxyGrantingTicketStorage" ref="pgtStorage"/>
  <beans:property name="proxyReceptorUrl" value="/@proxyreceptor@" />
  <beans:property name="serviceProperties" ref="serviceProperties" />
  <beans:property name="authenticationDetailsSource">
    <beans:bean class="org.springframework.security.cas.web.authentication.ServiceAuthenticationDetailsSource">
      <beans:constructor-arg ref="serviceProperties"/>
    </beans:bean>
  </beans:property>
</beans:bean>
```

```
<beans:bean id="serviceProperties" class="org.springframework.security.cas.ServiceProperties">
  <beans:property name="service"
    value="@cas.service.url@/@check@" />
  <beans:property name="sendRenew" value="false" />
  <beans:property name="authenticateAllArtifacts" value="true"/>
</beans:bean>
```


Simple Form **ADQL Form** Query Results



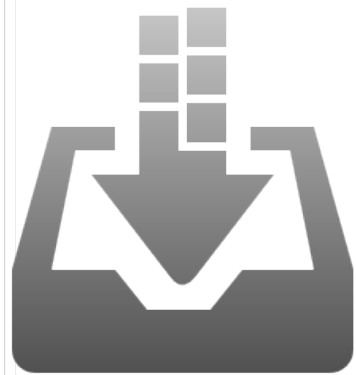
- Gaia tables**
 - public.dual
 - public.g10_fuzzy_1000
 - public.g10_fuzzy_100000
 - public.g10_fuzzy_1000000
 - public.g10_gai
 - public.g10_lmc
 - public.g10_mw
 - public.g10_quasars
 - public.g10_smc
 - public.g10_sn
 - public.gog_cataloguesource
 - public.igsl_source
 - public.igsl_source_catalog_ids
 - public.twomass_psc
 - public.tycho2
- User tables**
 - user_platest.tycho2
 - user_platest.xmatch_xmm_epic_source
 - user_platest.xmm_epic_source_cat
- Shared to me (from jsegovia)**
 - user_jsegovia.table1

Job name:

Query examples

1

Status	Job	Creation date	Num. rows	Size	
✓	1444834077993JC	14-Oct-2015, 16:47:57	5	6 KB	
✓	1434544316098JC	17-Jun-2015, 14:46:16	3	0 KB	
✓	1434544147844JC	17-Jun-2015, 14:29:08	3	0 KB	
✓	1434447471777JC	16-Jun-2015, 11:37:51	3	0 KB	
✓	1434447400050JC	16-Jun-2015, 11:36:40	3	0 KB	
✓	1434447281271JC	16-Jun-2015, 11:34:42	3	0 KB	



VOSpace Browser

snieto Help Sign Out

1.9 GB (3%) of 50GB

- My VOSpace
 - Euclid
 - for Pilar
 - Migration
 - Migration2
 - new-node
 - Security
 - Test
- Shared with me
 - hola
 - test

TITLE	OWNER	SIZE	LAST MODIFIED
Test	Sara Nieto	--	06/13/2015 12:26:36
Security	Sara Nieto	--	06/13/2015 13:36:26
new-node	Sara Nieto	--	06/12/2015 17:14:50
Migration2	Sara Nieto	--	06/15/2015 21:09:15
Migration	Sara Nieto	--	06/15/2015 21:08:00
for Pilar	Sara Nieto	--	06/12/2015 14:17:52
<input checked="" type="checkbox"/> Euclid	Sara Nieto	--	06/12/2015 14:21:42
EAS-PL-ESDC-SNR-001.pdf	Sara Nieto	401.6 KB	07/14/2015 10:39:11
1505.02291.pdf	Sara Nieto	1.5 MB	07/14/2015 10:39:36
1433328333_cloud.pdf	Sara Nieto	6.7 KB	06/14/2015 11:02:56

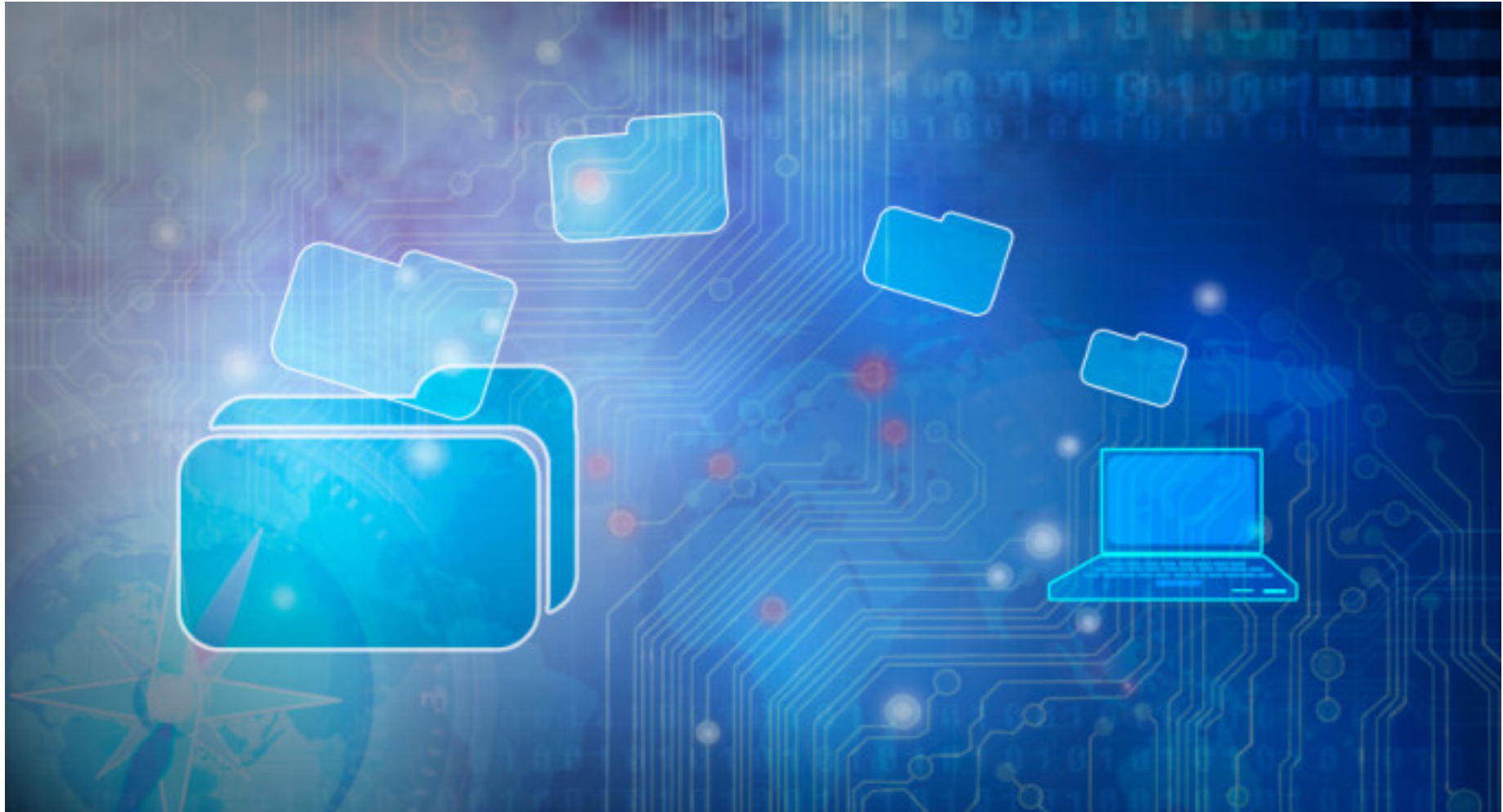
- ESA available solution
- CAS Proxy Tickets allows single-institution SSO
- CAS **allows federation**: OAuth v2.0, SAML

- Lessons learned:
 - **Filtering POST request**
 - Transfer representation is lost
 - pushToVoSpace over the endpoint with URL parameters
 - `curl -v -X POST "http://example.com/vospace/async?TARGET=xx&DIRECTION=pushToVoSpace&PROTOCOL=httpput"`

 - **UWS parameters**: Multipart content upload

- Next plans
 - Evolution of VOSpace infrastructure
 - Interoperability testing
 - Implementation VOSpace spec. v2.1
 - Server-initiated transfers
 - Search (Apache Lucene)
 - Shareable URL
 - and more...

Open Discussion



Connecting Data Sets (Open discussion)

- Multiple VOSpace services
- Multiple providers/institutions
- Multiple user accounts
- Federated authentication

Service initiated transfers

How to manage multiple VOSpace user accounts from different providers?



Multi-account use case



VOSpace Browser



snieto ▾ Help Sign Out



1.9 GB (3%) of 50GB

- ▼ My VOSpace
 - Euclid
 - for Pilar
 - Migration
- ▼ Shared with me
 - new-node
 - Security
 - Test
- ▼ VO Accounts
 - snieto @vospaceA
 - snieto @vospaceB

▶ My VOSpace

	TITLE	OWNER	SIZE	LAST MODIFIED
<input type="checkbox"/>	Test	Sara Nieto	--	06/13/2015 12:26:36
<input type="checkbox"/>	Security	Sara Nieto	--	06/13/2015 13:36:26
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<input type="checkbox"/>	for Pilar	Sara Nieto	--	06/12/2015 14:17:52
<input checked="" type="checkbox"/>	Euclid	Sara Nieto	--	06/12/2015 14:21:42
<input type="checkbox"/>	EAS-PL-ESDC-SNR-001.pdf	Sara Nieto	401.6 KB	07/14/2015 10:39:11
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<input type="checkbox"/>	1433328333_cloud.pdf	Sara Nieto	6.7 KB	06/14/2015 11:02:56

Commercial applications

- Applications:
 - Dropbox
 - Google Drive
 - SkyDrive
 - Box
 - WebDav
 - ...
- Cloud Storage Managers
 - Otixo
 - CloudHQ
 - CloudKafé
 - ...



Amazon Cloud



Box



Dropbox



Google Drive



Flickr



Evernote



Picasa



Facebook



Copy



MyDrive



Dump Truck



4Shared

Open discussion

- Cross-domain federated authentication is needed
- Alternatives:
 - External service: VO Cloud Storage?
 - Extended VOSpace interface?



Questions?
Comments?