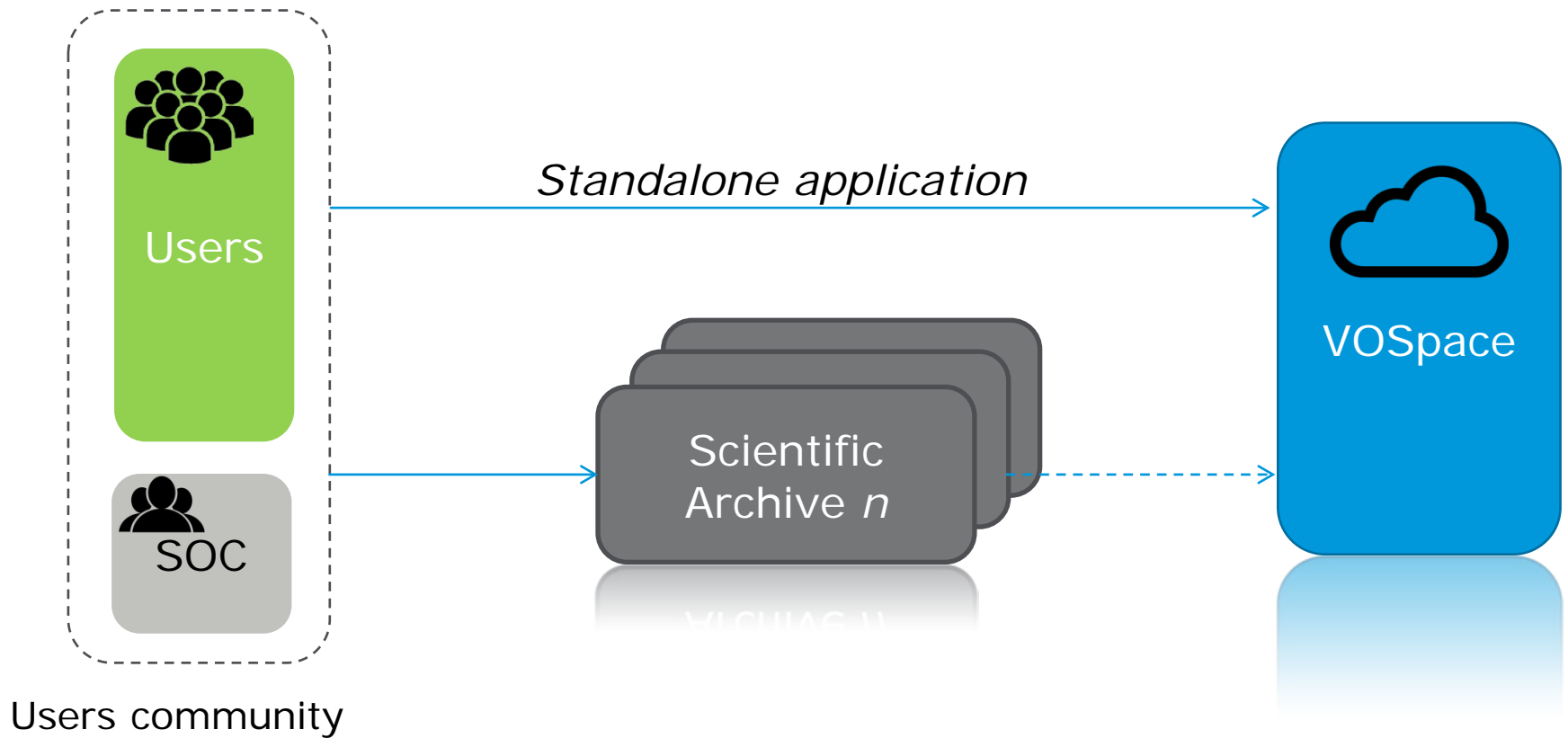# ESAC VOSpace Application

ESAC Science Data Center
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Interop June 2015
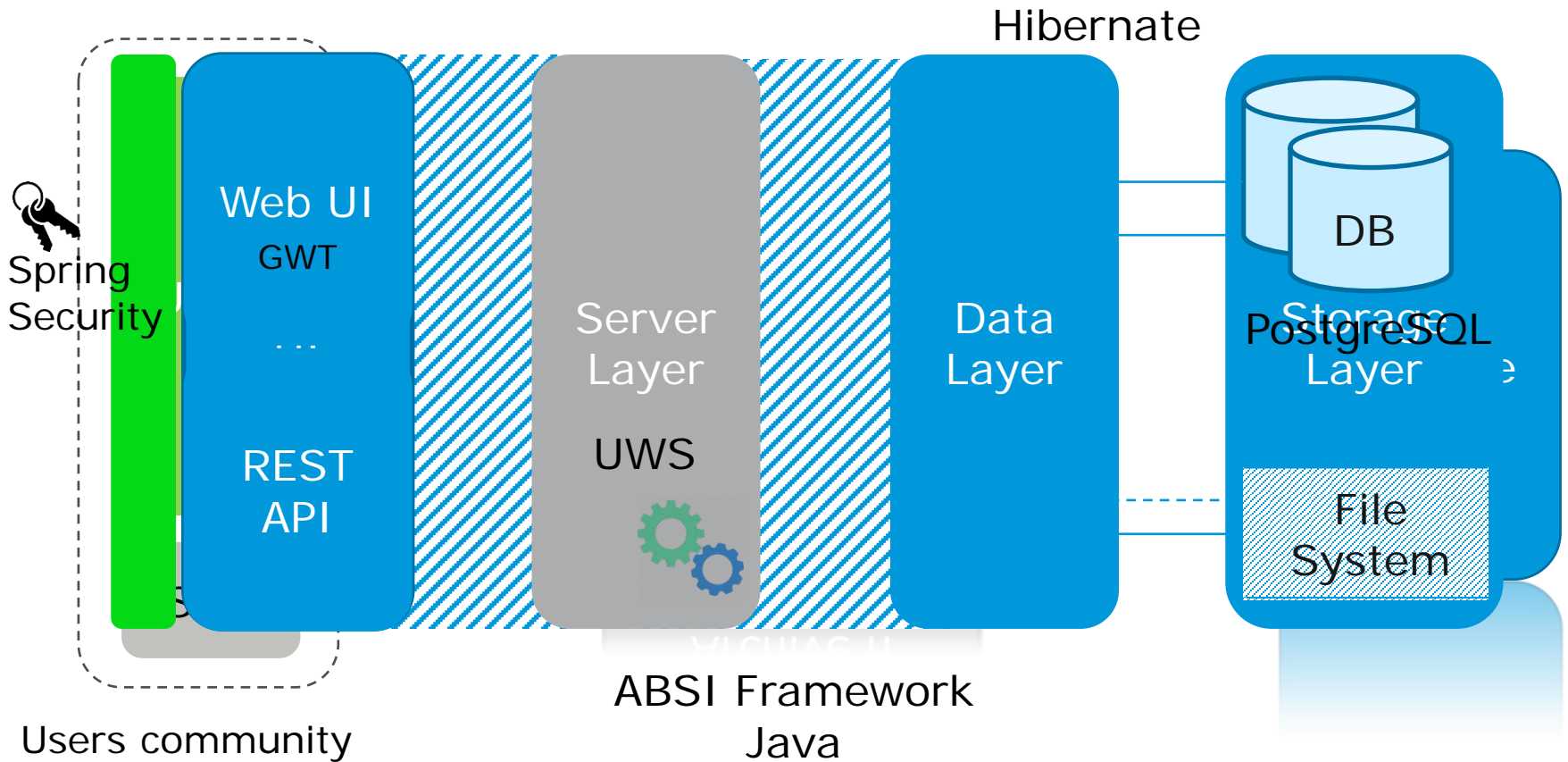
- Context

- Status

- Design

- How to access?

- Demo

- Future!

VOSpace purpose

Standalone application

Users

SOC

Users community

Scientific Archive *n*
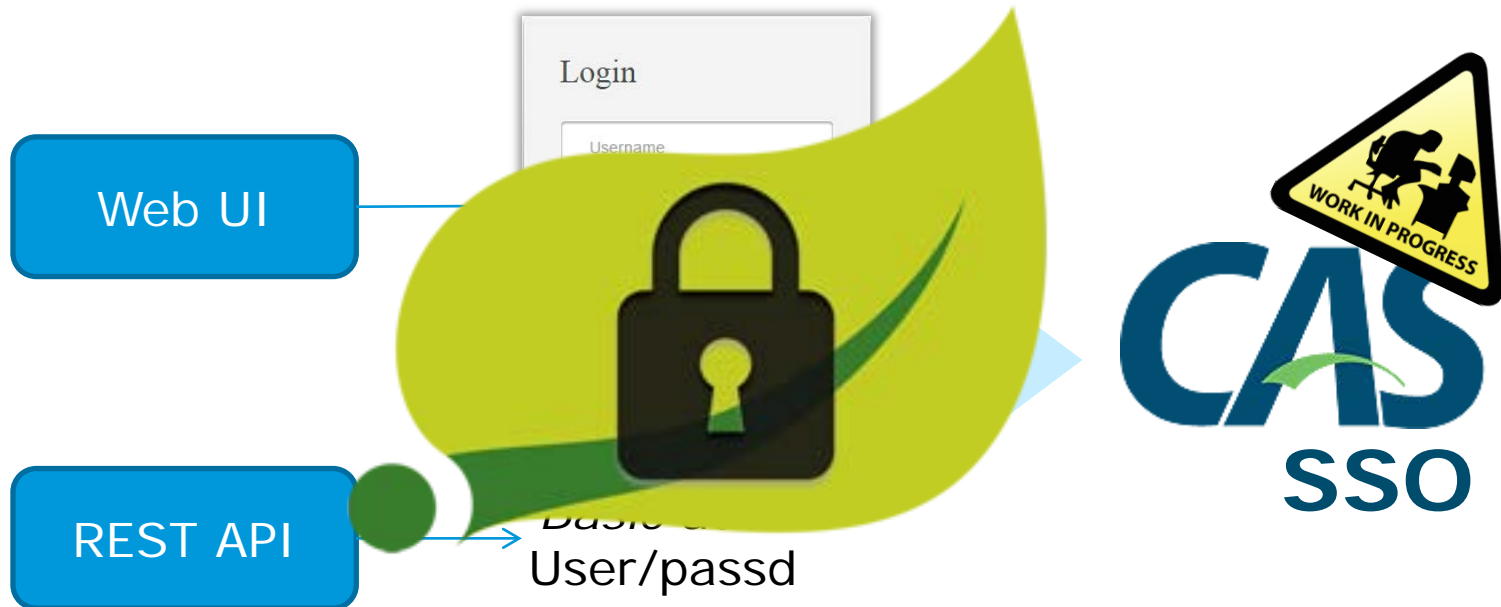
VOSpace

Status, where are we now?

- **VOSpace specification v2.0**

- Operations supported:
  - Service metadata:
    - *Get protocols, views and properties*
  - Creating and manipulating data nodes:
    - *Create, move, copy and delete node*
  - Accessing metadata:
    - *Get and set node*
  - Transferring data:
    - *Client-initiated transfers: pushTo and pullFromVOSpace*

- Search and service-initiated transfers are **not supported**

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- Some service specific
  - JSON and XML for transfer information
  - **Private** user areas (quota)
  - Groups management
  - Specific properties: *userread*, *userwrite*
  - **Authentication** mechanisms
  - **New REST** operations:
    - **GET /share/user**
    - **GET /share/group**

Design & Architecture

Hibernate

Spring
Security

Web UI
GWT
...
REST
API

Server
Layer
UWS

Data
Layer

DB
PostgreSQL
Layer

File
System

Users community

ABSI Framework
Java

- What to secure?

Login

Username

Web UI

REST API

Basic a...
User/passd

CAS
SSO

DEMO!

Go to VOSpace

REST API examples

- **GET /servlet/properties**

```xml
<?xml version="1.0" encoding="UTF-8"?>
<vos:properties xmlns:vos="http://www.ivoa.net/xml/VOSpace/v2.0">
    <accepts>
        <vos:property uri="vos://esavo!vospace/properties#length" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#date" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#description" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#groupread" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#groupwrite" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#userread" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#userwrite" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#publicread" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#mtime" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#btime" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#permission" readOnly="false" />
    </accepts>
    <provides />
    <contains>
        <vos:property uri="vos://esavo!vospace/properties#btime" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#length" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#description" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#groupwrite" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#date" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#userwrite" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#userread" readOnly="false" />
        <vos:property uri="vos://esavo!vospace/properties#mtime" readOnly="false" />
    </contains>
</vos:properties>
```

REST API examples

- **GET /servlet/nodes/snieto/Euclid/EA.zip**

```xml
<?xml version="1.0" encoding="UTF-8"?>
<vos:node xmlns:vos="http://www.ivoa.net/xml/VOSpace/v2.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="vos:UnstructuredDataNode" uri="vos://esavo!vospace/snieto/Euclid/EA.zip" busy="false">
        <vos:properties>
                <vos:property uri="vos://esavo!vospace/properties#mtime" readOnly="false">06/12/2015 14:22:58</vos:property>
                <vos:property uri="vos://esavo!vospace/properties#btime" readOnly="false">06/12/2015 14:22:58</vos:property>
                <vos:property uri="vos://esavo!vospace/properties#length" readOnly="false">81096253</vos:property>
        </vos:properties>
</vos:node>
```

- **PUT /servlet/nodes/snieto/new-node**

```xml
<?xml version="1.0" encoding="UTF-8"?>
<vos:node xmlns:vos="http://www.ivoa.net/xml/VOSpace/v2.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:type="vos:ContainerNode" uri="vos://esavo!vospace/snieto/new-node">
        <vos:properties>
                <vos:property uri="vos://esavo!vospace/properties#btime" readOnly="false">06/12/2015 17:14:50</vos:property>
                <vos:property uri="vos://esavo!vospace/properties#mtime" readOnly="false">06/12/2015 17:14:50</vos:property>
                <vos:property uri="vos://esavo!vospace/properties#date" readOnly="false">18/06/2015 00:00:00</vos:property>
                <vos:property uri="vos://esavo!vospace/properties#length" readOnly="false">4096</vos:property>
                <vos:property uri="vos://esavo!vospace/properties#description" readOnly="false">Test node.</vos:property>
                </vos:properties>
        <vos:nodes />
</vos:node>
```

REST API examples

- **GET /servlet/share**

{ "Nodes": [
  { "Owner":
    { "Name": "jgonza01",
    "FullName": "Juan Gonzalez"},
    "Type": "ContainerNode",
    "Uri": "vos://esavo!vospace/jgonza01/test",
    "Role": "editor",
    "Properties": [
      { "Value": "4096", "Uri": "vos://esavo!vospace/properties#length", "Readonly":false},
      { "Value": "snieto", "Uri": "vos://esavo!vospace/properties#userwrite", "Readonly":false},
      { "Value": "10/12/2014 16:00:00", "Uri": "vos://esavo!vospace/properties#btime", "Readonly":false},
      { "Value": "10/12/2013 16:00:00", "Uri": "vos://esavo!vospace/properties#mtime", "Readonly":false}]}]
}

Future Plans

- Next plans
  - CAS SSO Implementation
  - **Integration within the Gaia archive**
  - Implementation VOSpace spec. v2.1
    - Server-initiated transfers
    - Search (Apache Lucene)
  - Interoperability testing
  - Migrate infrastucture

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More Information

- Sites:
    - Documentation online
    - Source code will be publicly available in Github.
- Email: sat_euclid@sciops.esa.int

    snieto@sciops.esa.int

Thanks for listening!

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