FIWARE ChanChan

https://github.com/Bitergia/fiware-chanchan

Sample application using Authentication and Authorization
for publish CKAN contents using Orion Context Broker

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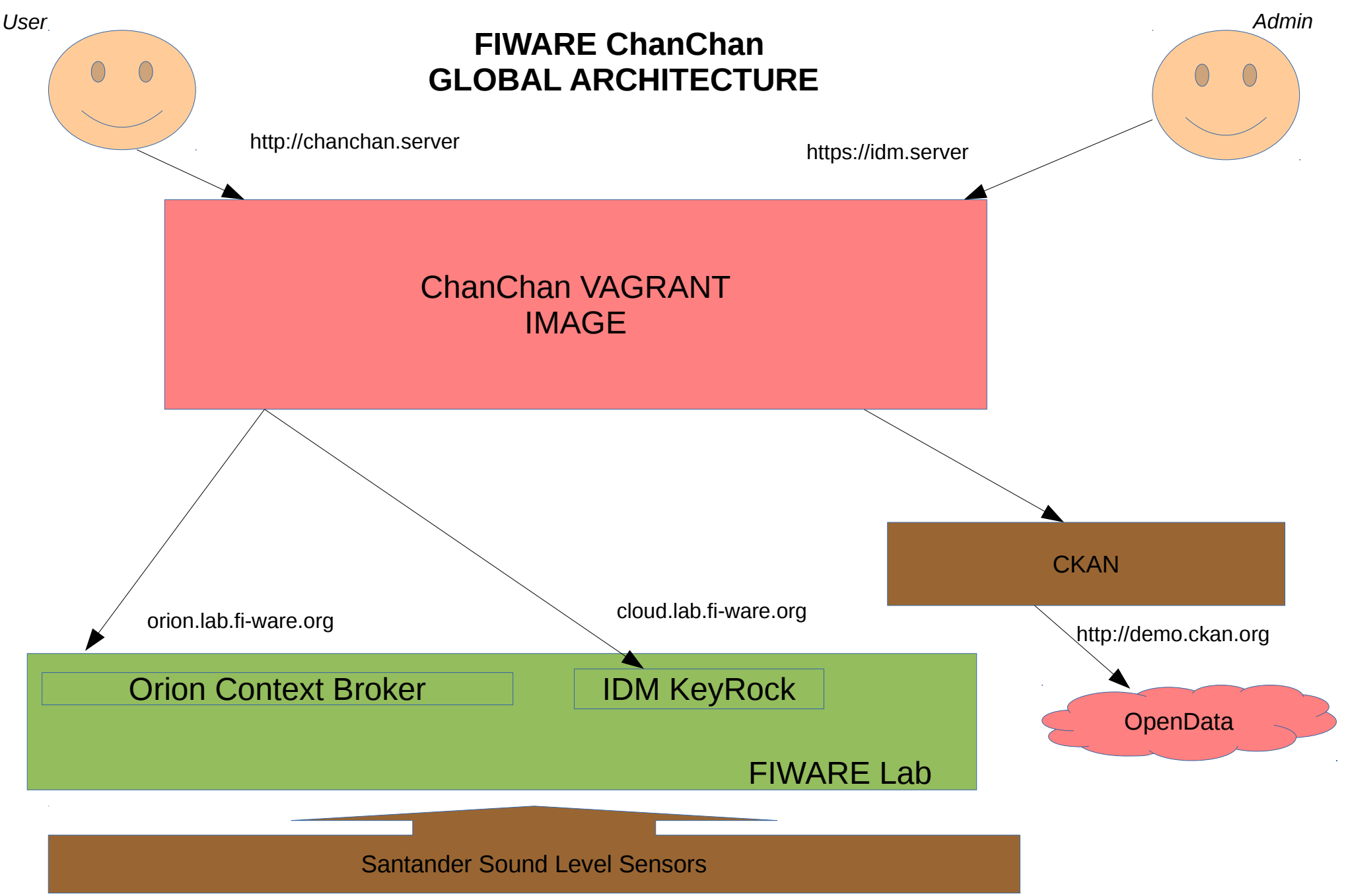
FIWARE Friendly Testing

Goals

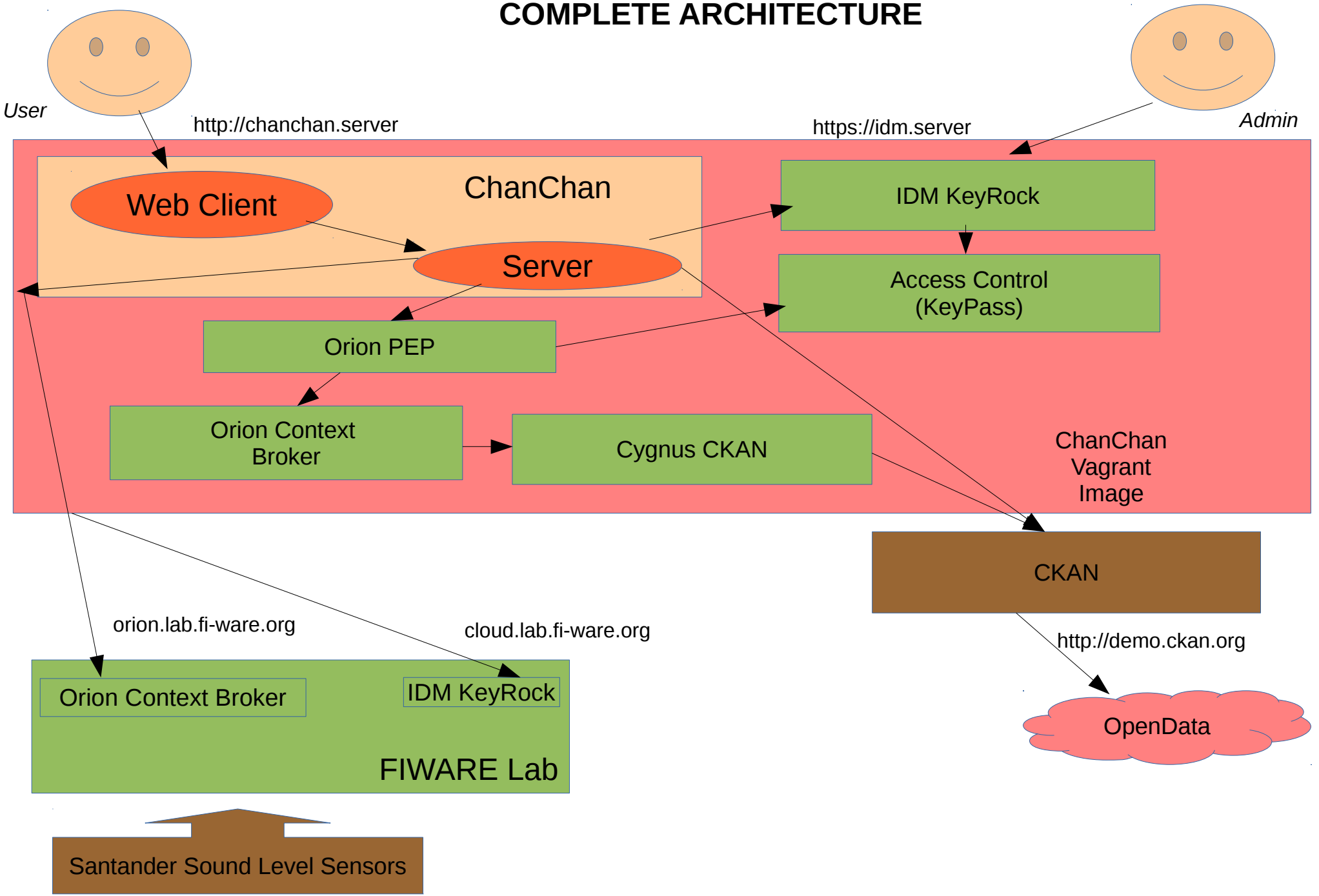
- Create a sample application integrating FIWARE GEs for publish Internet of Things (IoT) content in CKAN.
- Use Authentication (IDM Key Rock) and Authorization (Thales Access Control) for user permissions management using organizations.
- Use Orion Context Broker (through Cygnus CKAN) to publish content in CKAN.

Results

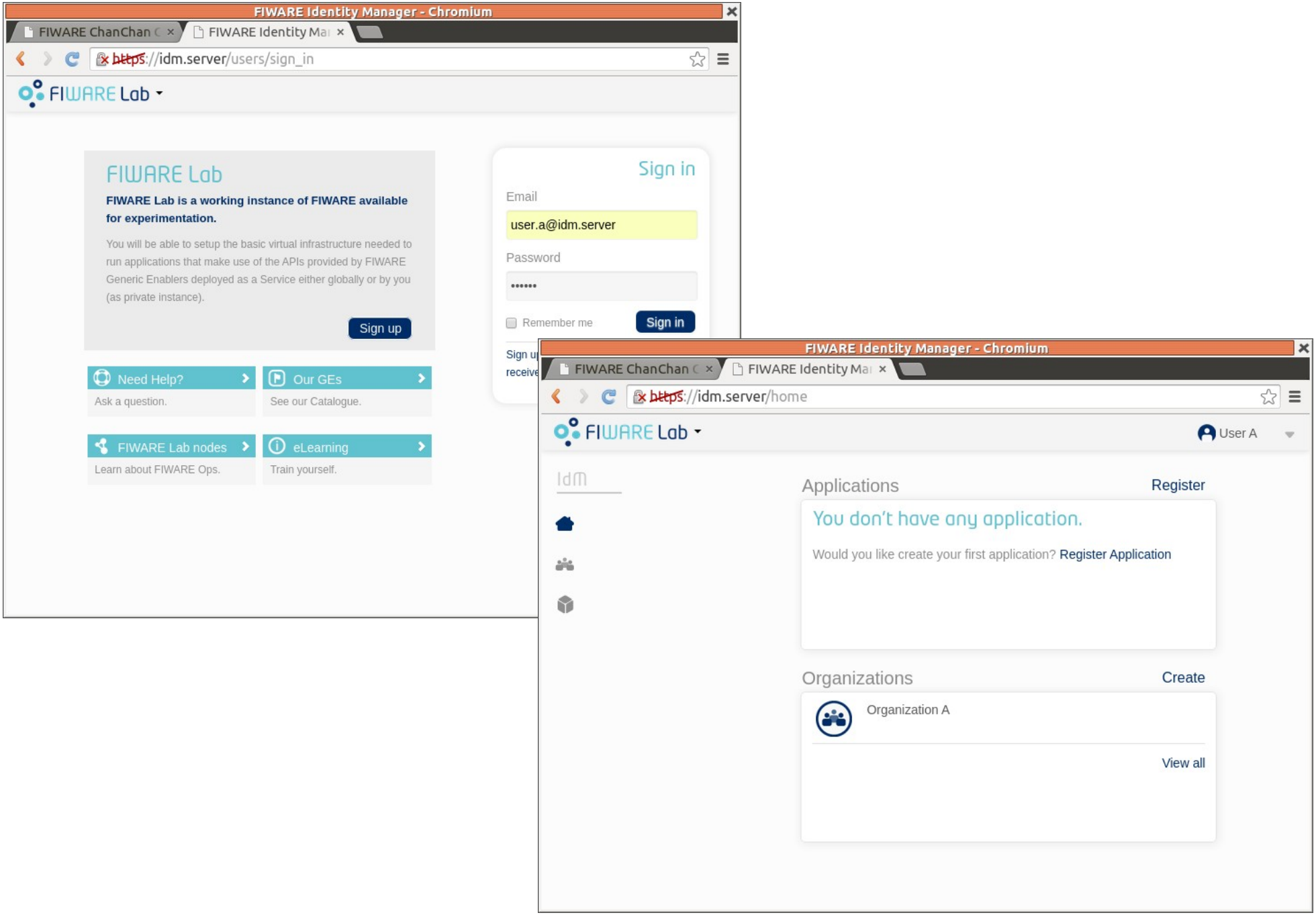
- Web based (SPA) application with two panels:
  - Manual publishing of data in CKAN.
  - Santander Sound Level Meters sensors publishing in CKAN.
- Provision system for deploying automatically all platform using VAGRANT or a FIWARE Image based in Ubuntu 14.04.


User
Admin
FIWARE ChanChan
GLOBAL ARCHITECTURE
http://chanchan.server
https://idm.server
ChanChan VAGRANT
IMAGE
CKAN
orion.lab.fi-ware.org
cloud.lab.fi-ware.org
http://demo.ckan.org
Orion Context Broker
IDM KeyRock
FIWARE Lab
OpenData
Santander Sound Level Sensors

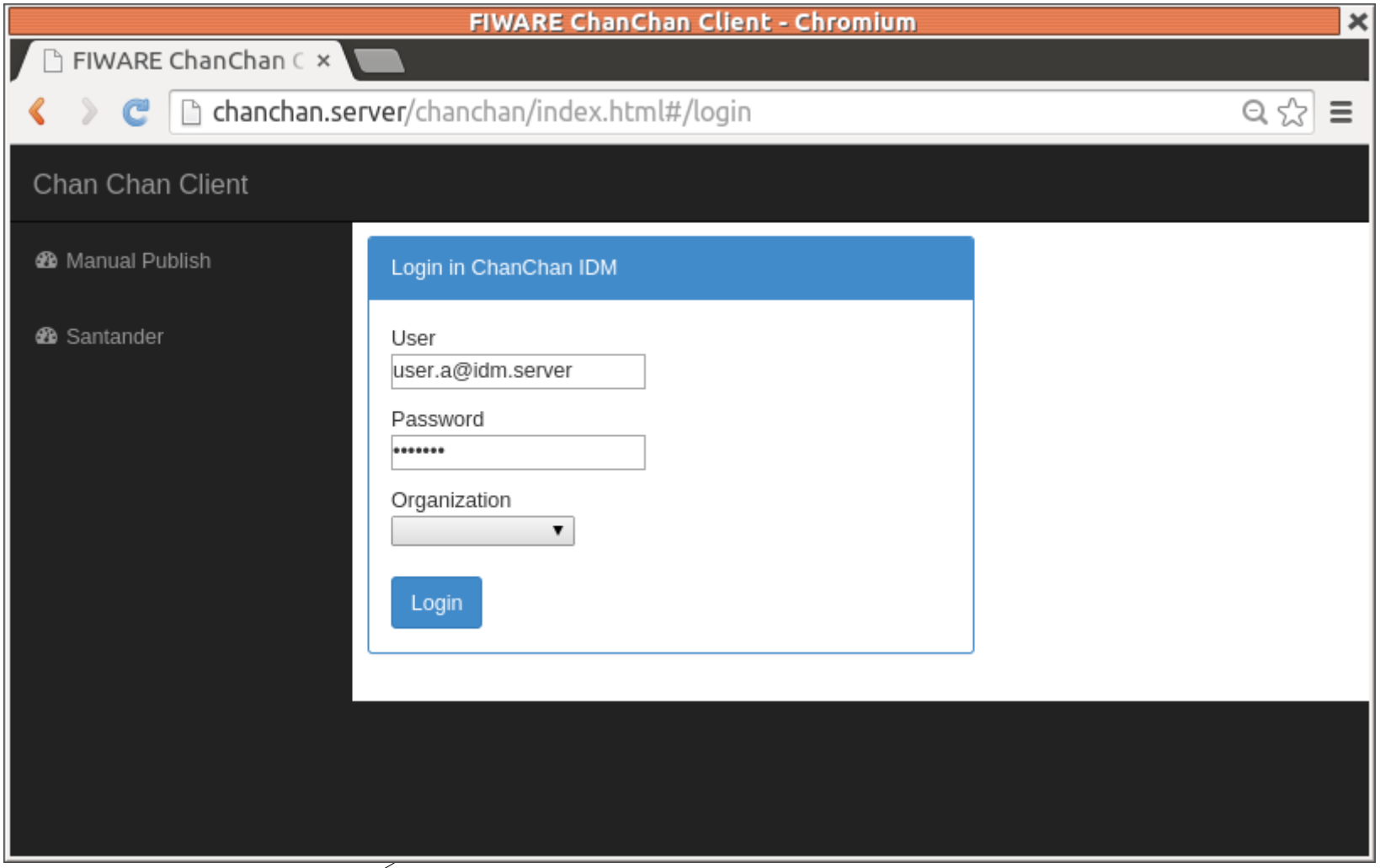
FIWARE ChanChan
COMPLETE ARCHITECTURE

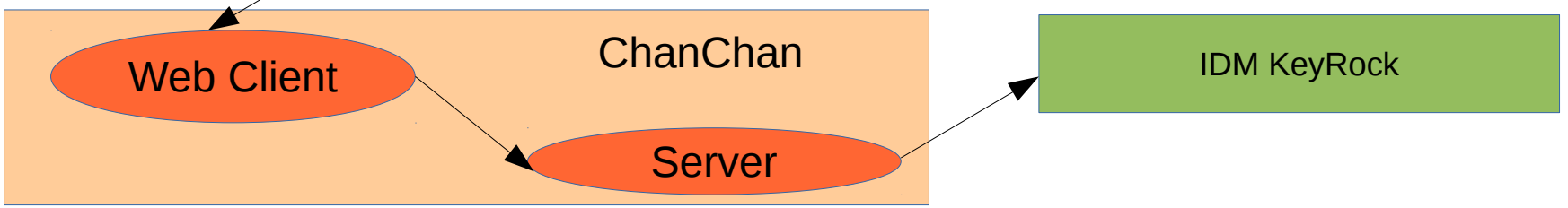


Authentication (I)

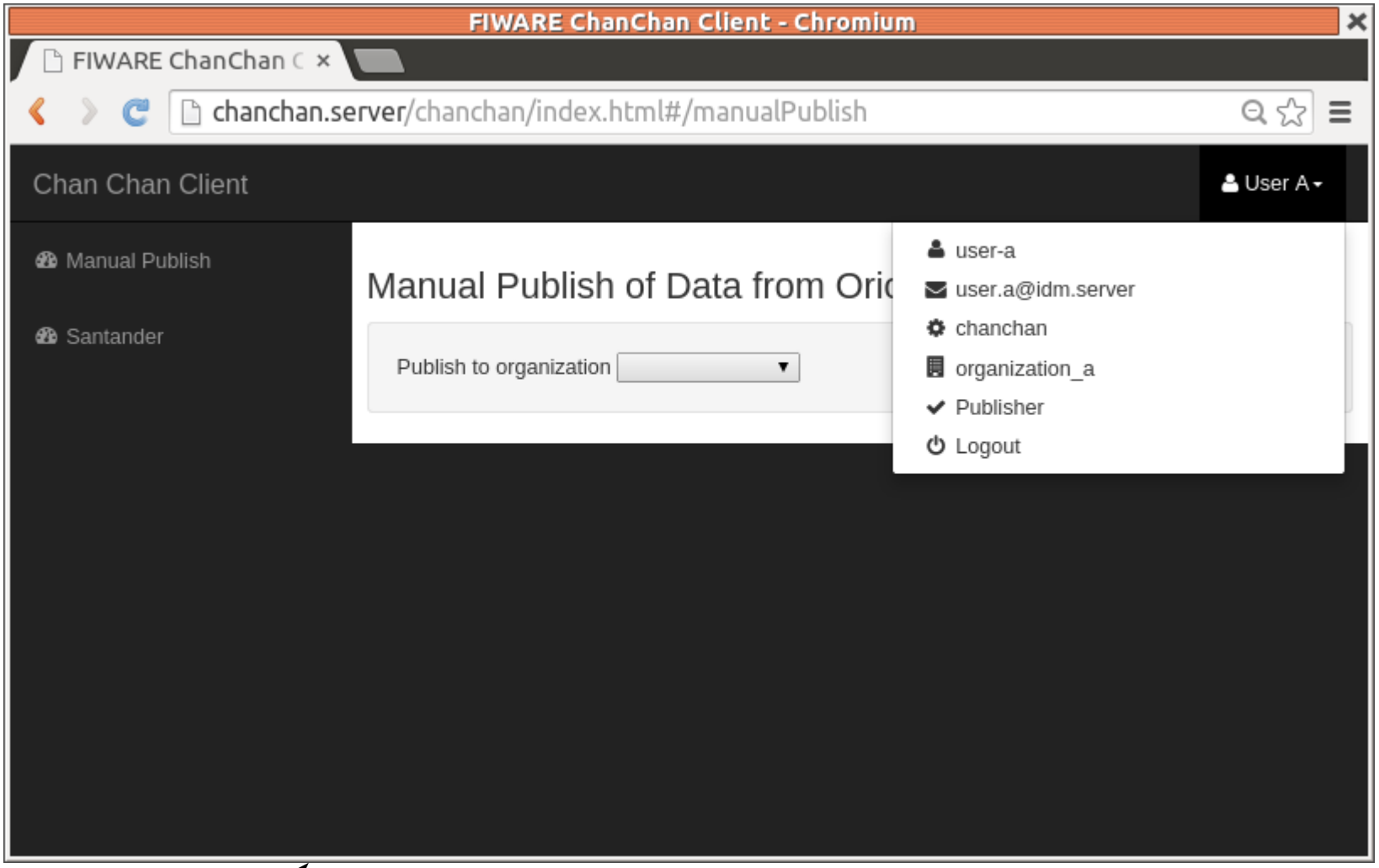


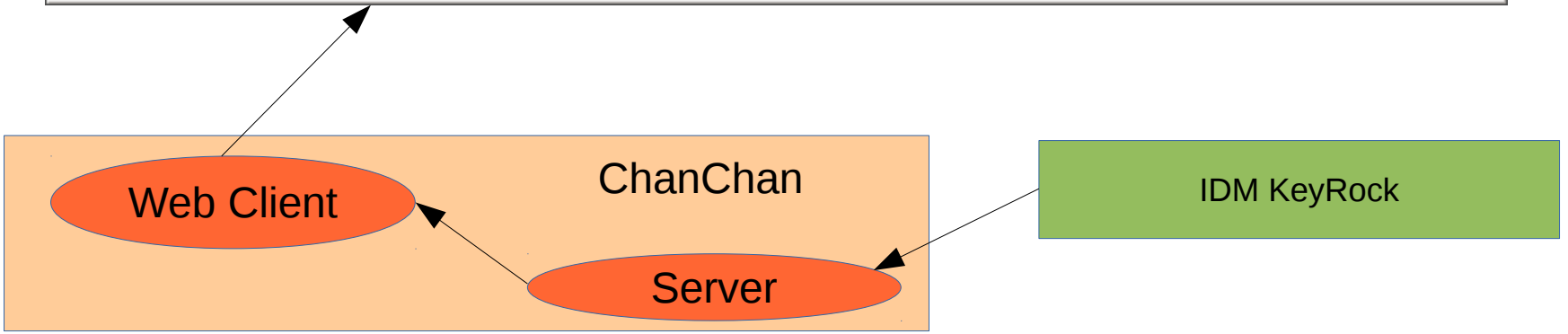
Authentication (II)



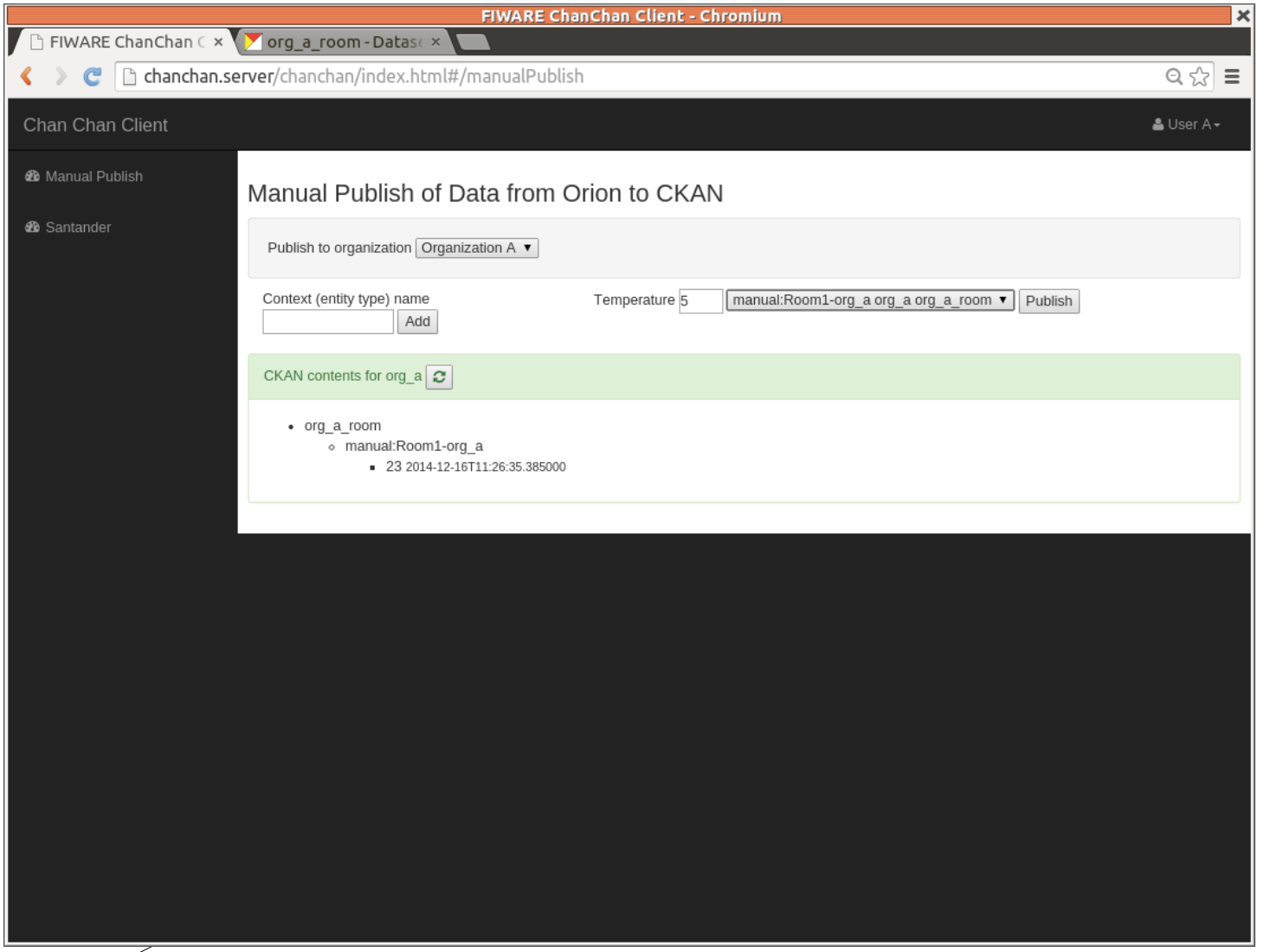


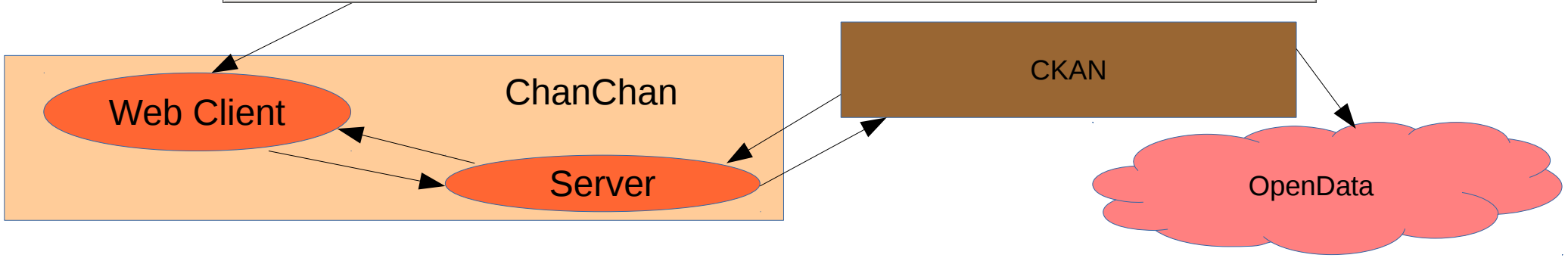
Authentication (II)





Manual Publish (Data from CKAN)





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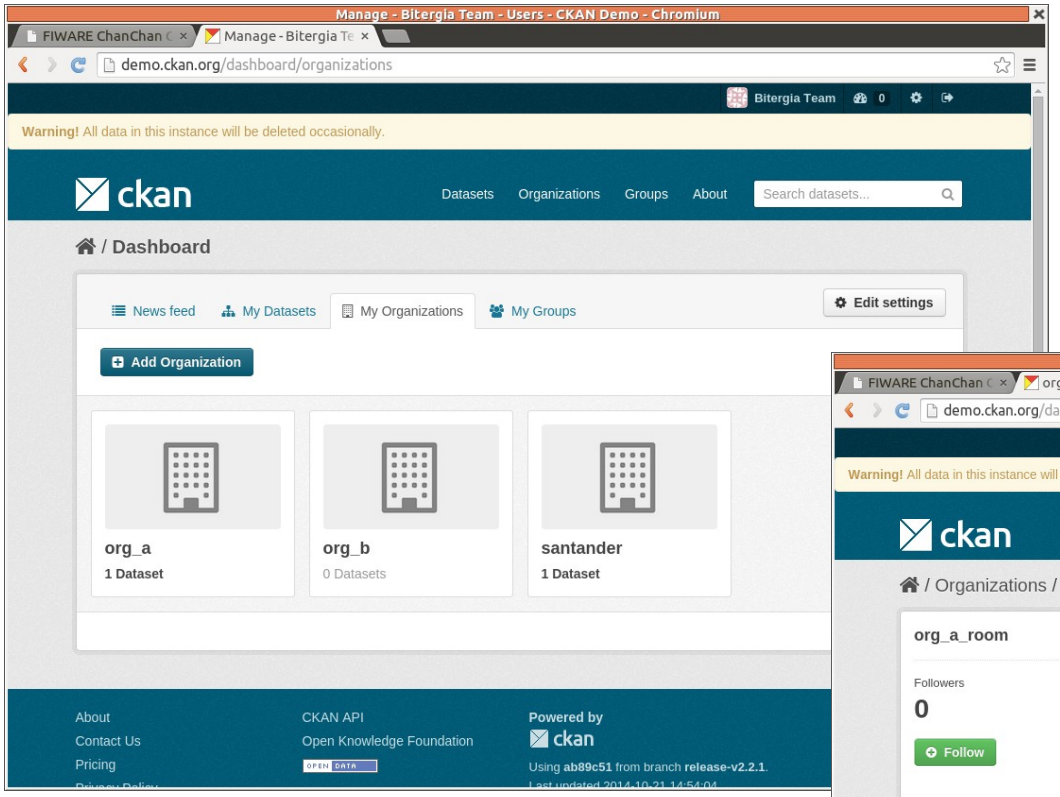
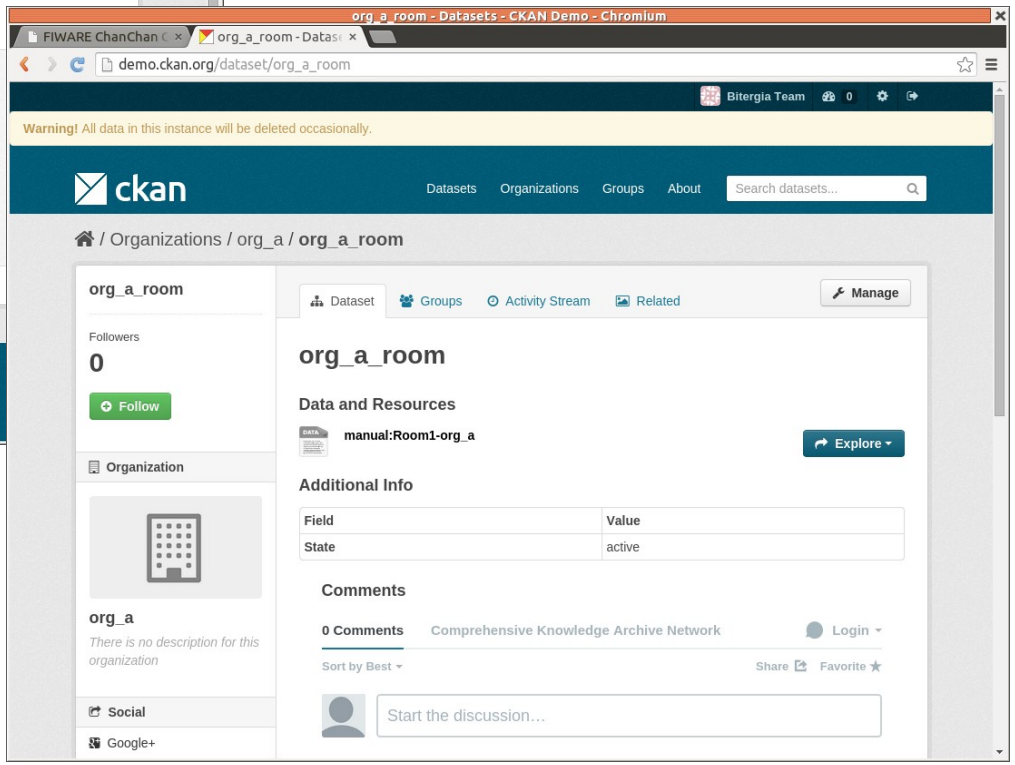
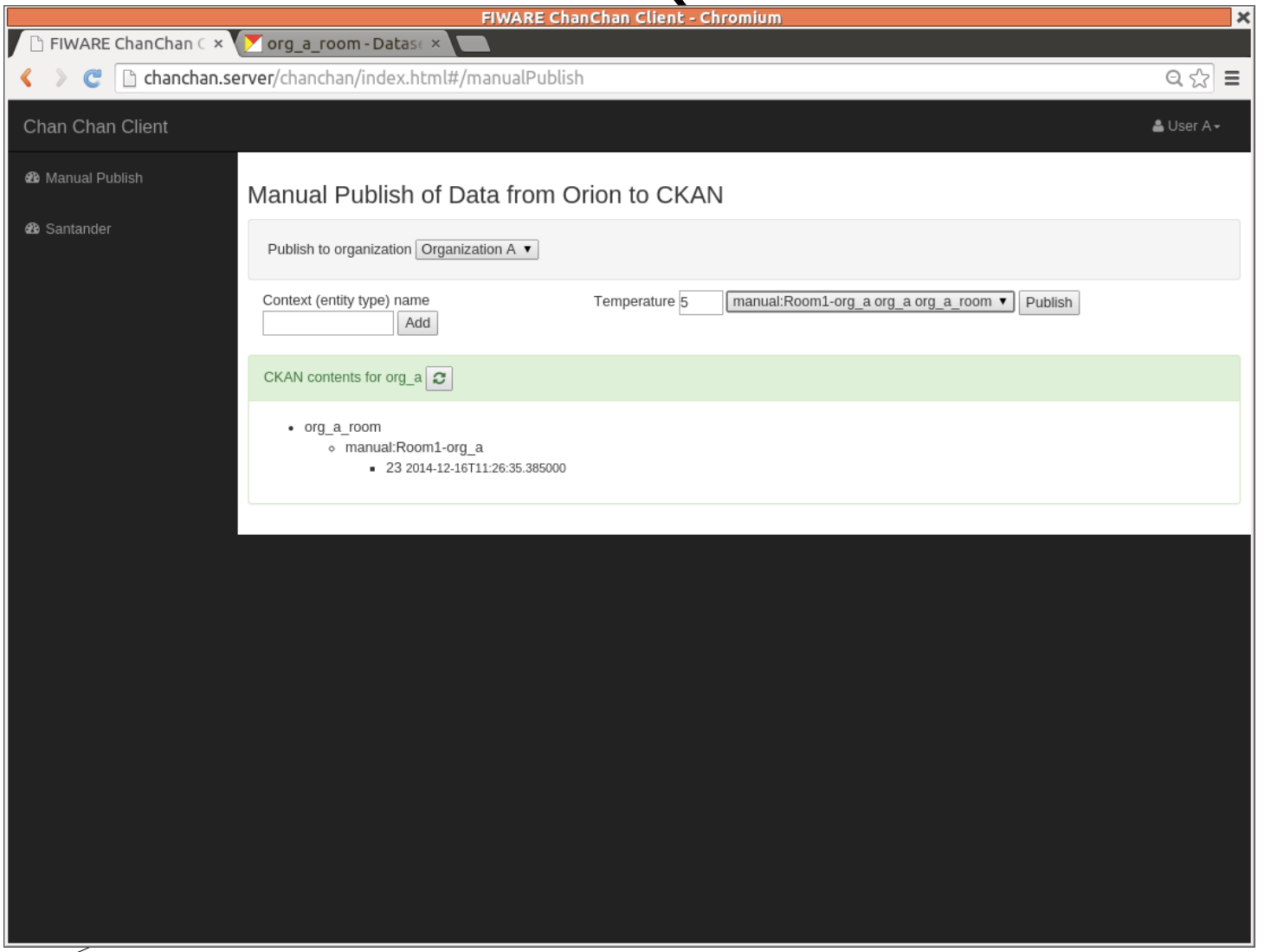
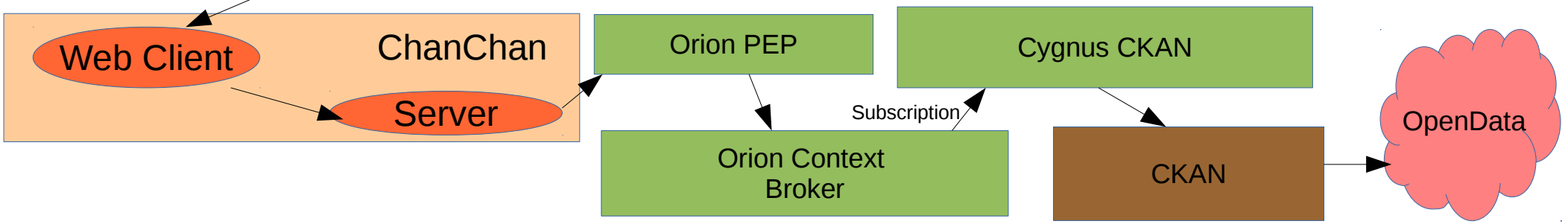




Manual Publish (Data to CKAN)





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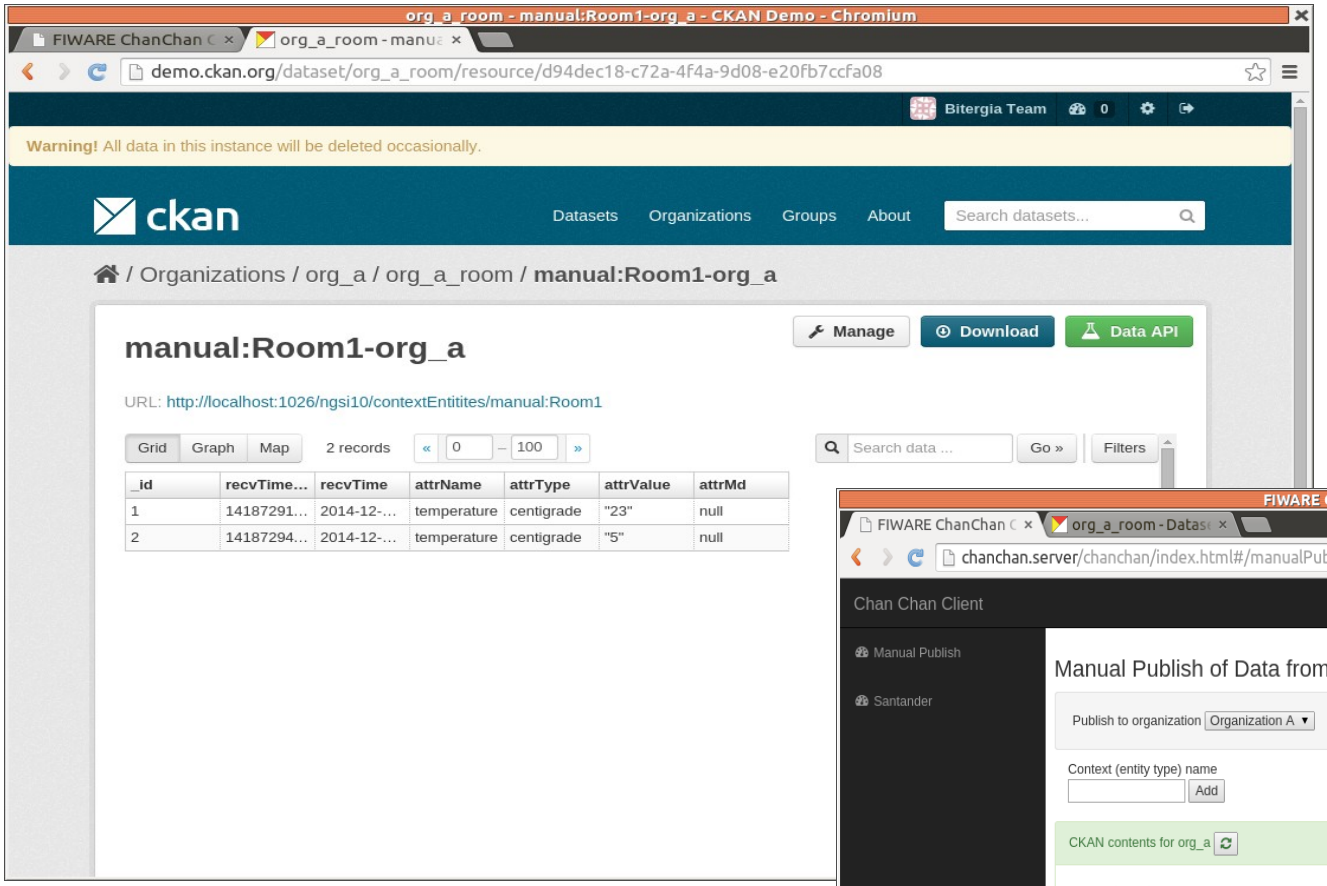
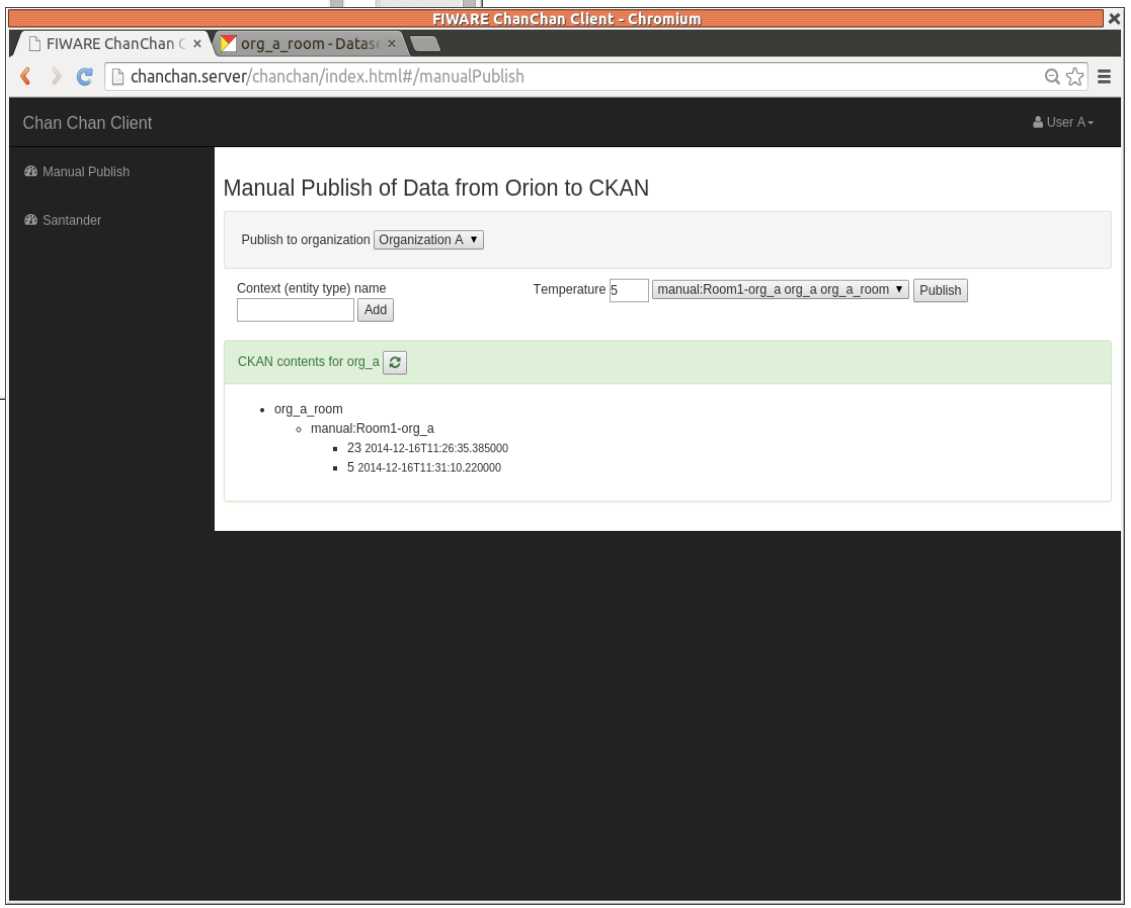
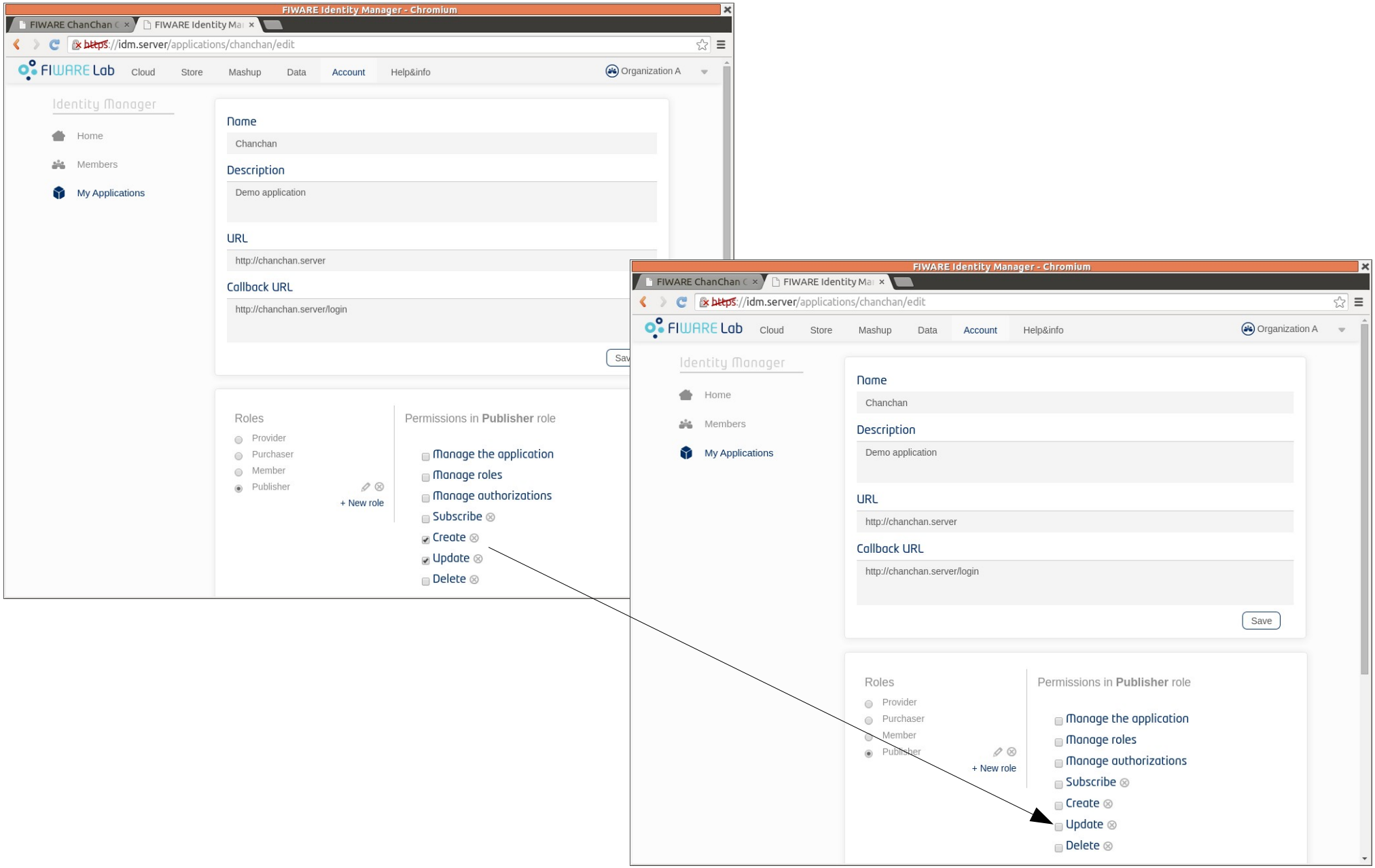




Manual Publish (Access Control)



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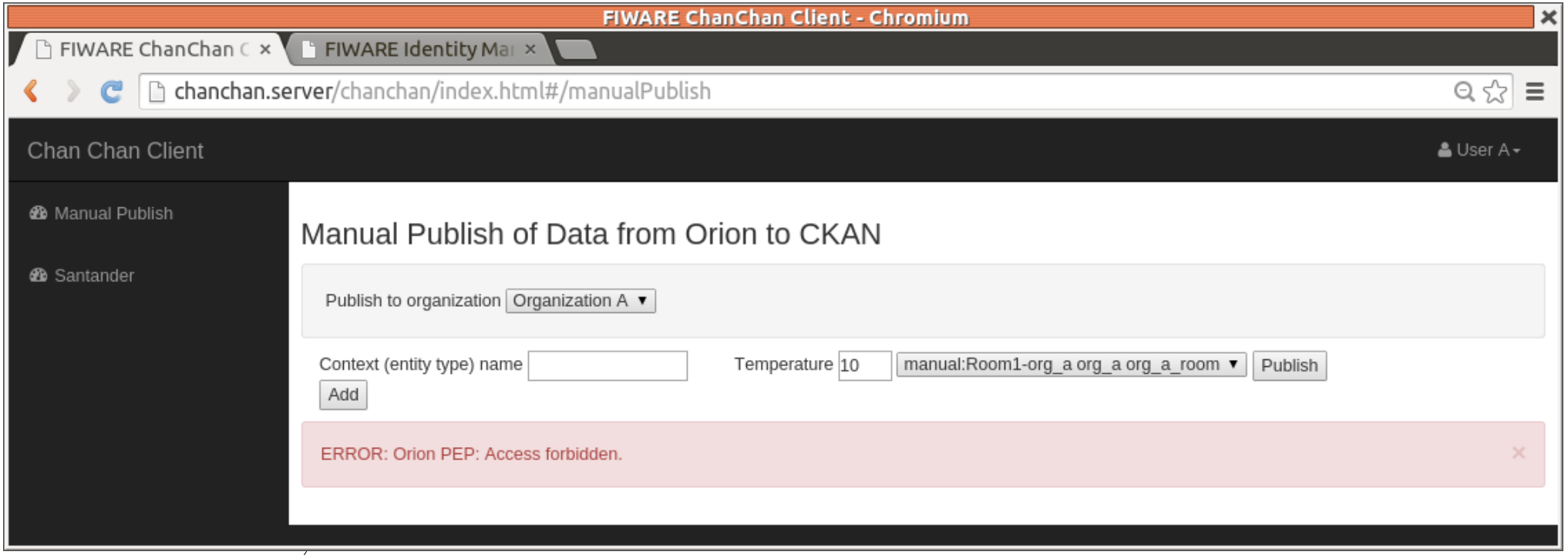
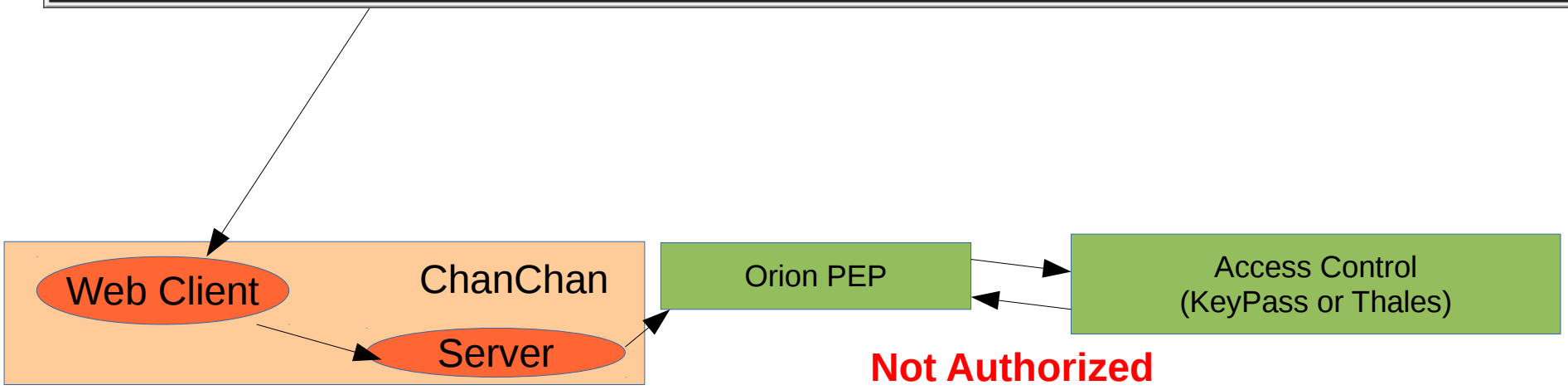
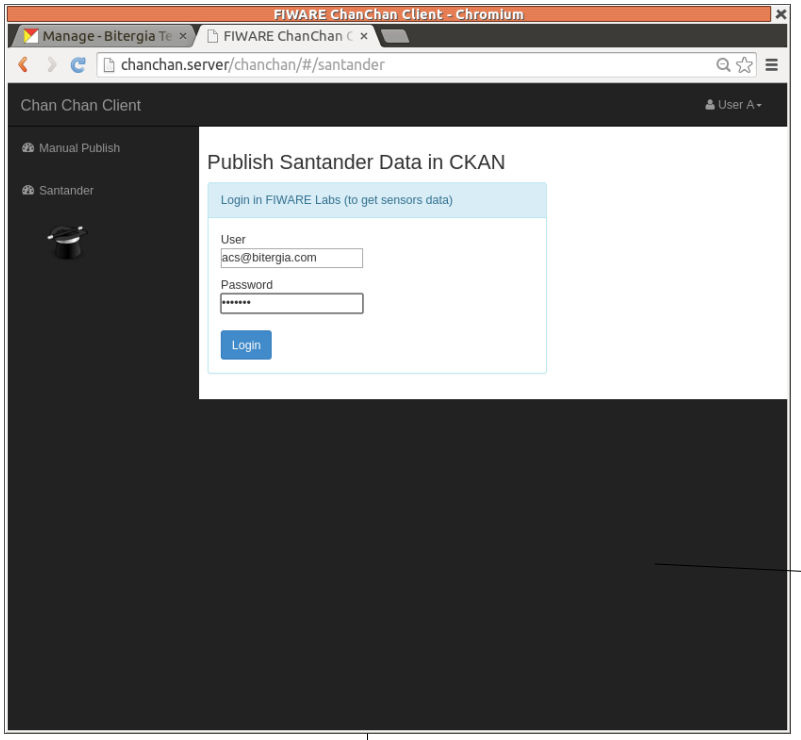
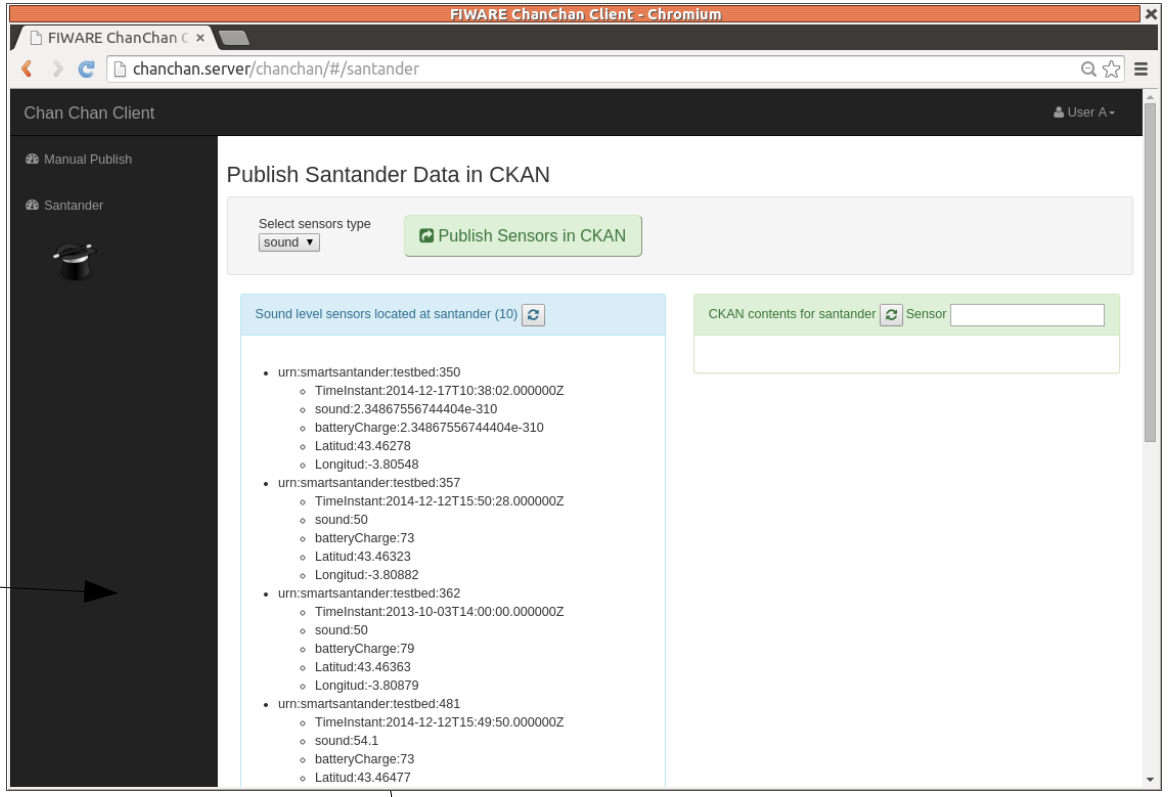




Santander Sound Level Sensors

Santander Sound Level Sensors





cloud.lab.fi-ware.org

orion.lab.fi-ware.org

IDM Key Rock

FIWARE Lab

Orion Context Broker

FIWARE Lab

Santander Sound Level Sensors

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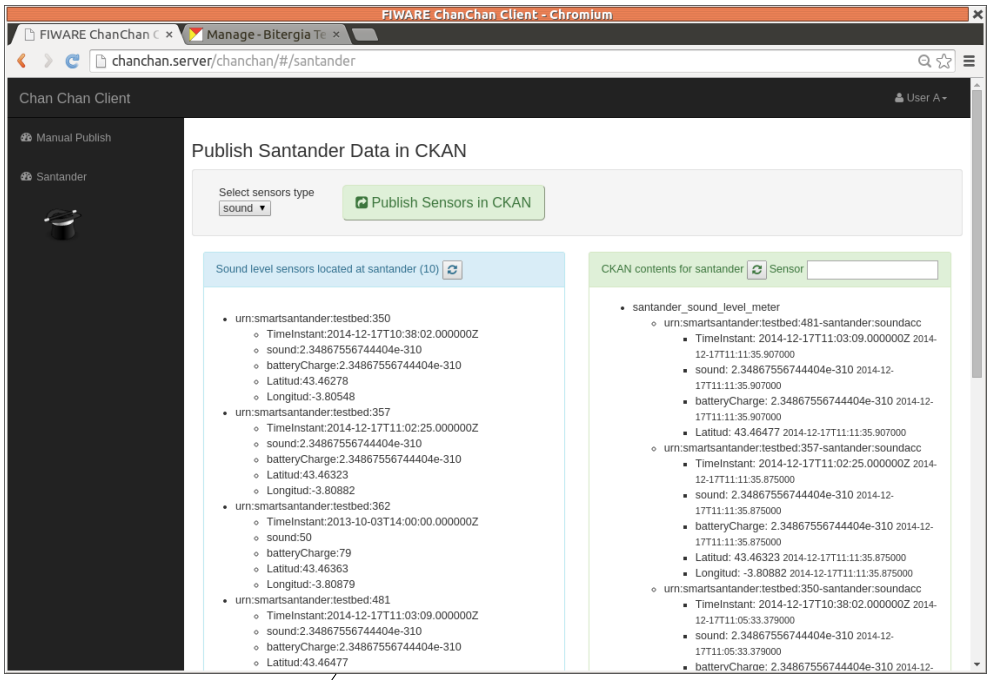

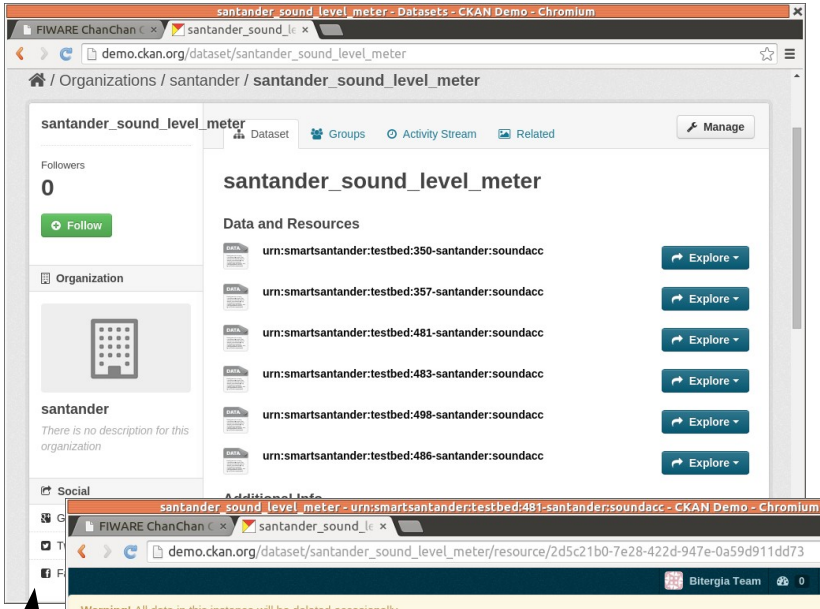

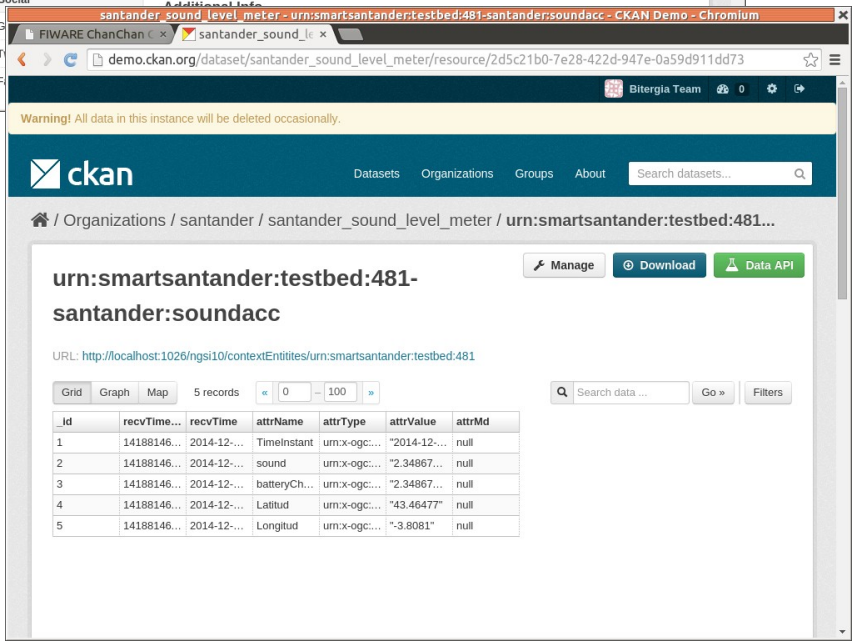

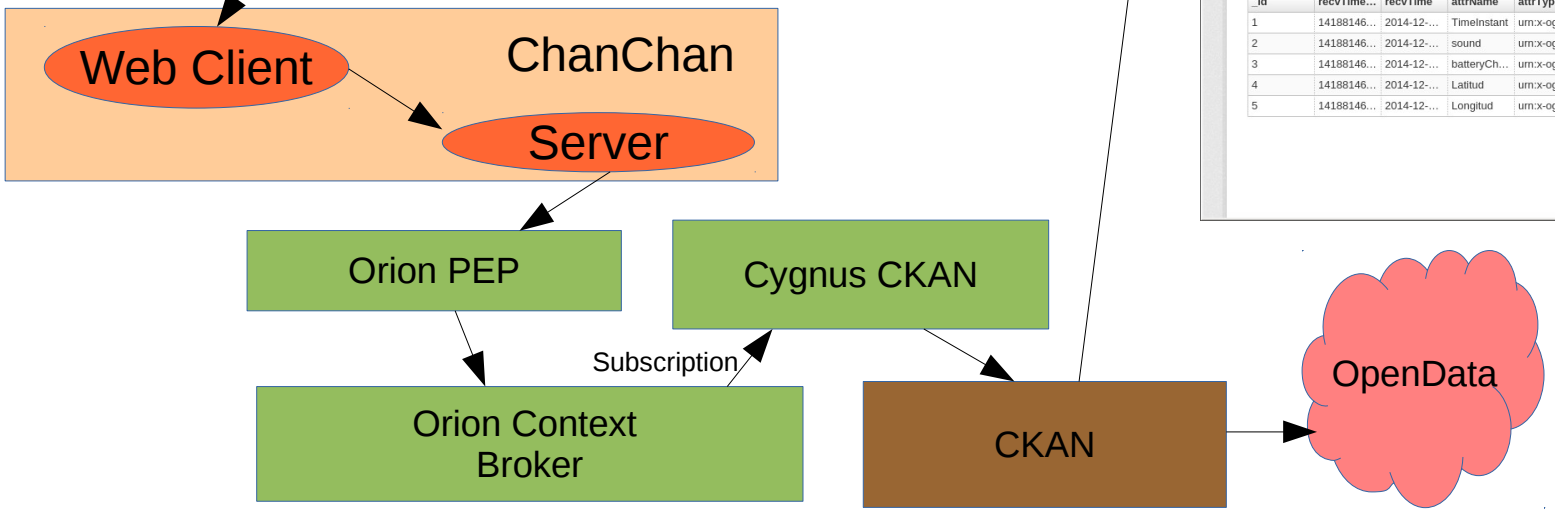

Work Done: Provision

- All ChanChan platform is installed automatically using VAGRANT or an Ubuntu 14.04 image. All components are Open Source (KeyPass substitutes Access Control).
- Provision (download, compile, install, configure, integration and initial deploy) has been done for:
  - ChanChan client and server
  - KeyRock IDM
  - Orion
  - Orion PEP
  - Cygnus CKAN
  - KeyPass

https://github.com/Bitergia/fiware-chanchan/tree/master/vagrant/scripts

Work Done: ChanChan

- ChanChan client is a Single Page Application Web using AngularJS. It uses the REST interfaces offered by ChanChan server.
- ChanChan server is a Node.js based gateway that offers a REST interface for access CKAN, IDM Key Rock, Orion and Orion PEP REST interfaces.

Work Done: Santander Sensors

- Access to Santander Sensors for Sound Level Meter is done using Orion in FIWARE Labs.
- Current approach is “pull” in order ChanChan app does not need a public end point for “push”.
- Adding new sensors should be pretty easy.

Work Done: IDM KeyRock and KeyPass

- IDM KeyRock does not support KeyPass. This support has been developed and contributed upstream.

Conclusions

- ChanChan platform could be used to bootstrap systems than needs authentication, authorization and context broker, the basic FIWARE GEs. So it could be seen as a FIWARE SDK.
- ChanChan platform could be used to track the development of KeyRock, Orion, Orion PEP, Cygnus and KeyPass and test quickly all of them and its integration. It is an efficient testbed that is “cheap” to maintain.
- ChanChan platform shows a complete platform and a SPA web app that uses them, lowering the entry barrier for new developers to FIWARE.

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