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AUTHENTICATION AND AUTHORIZATION MANAGEMENT TO OGC SERVICES WITH GEOSHIELD: IMPROVEMENTS FROM FOSS4G 2009

FOSS4G 2010
Barcelona

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Istituto Scienze della Terra - SUPSI - Switzerland

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Content

- Quick intro
- Security issues with OGC standards
- Security with GeoShield
- Tecnologies and design
- Web administration interface
- WFS security
- Next improvements
- Q&A

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QUICK INTRO

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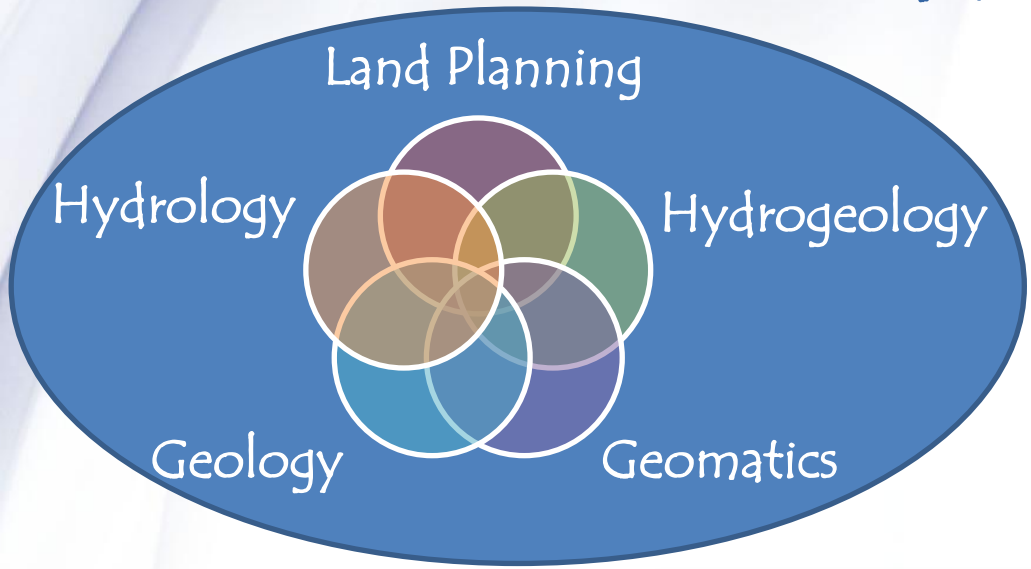
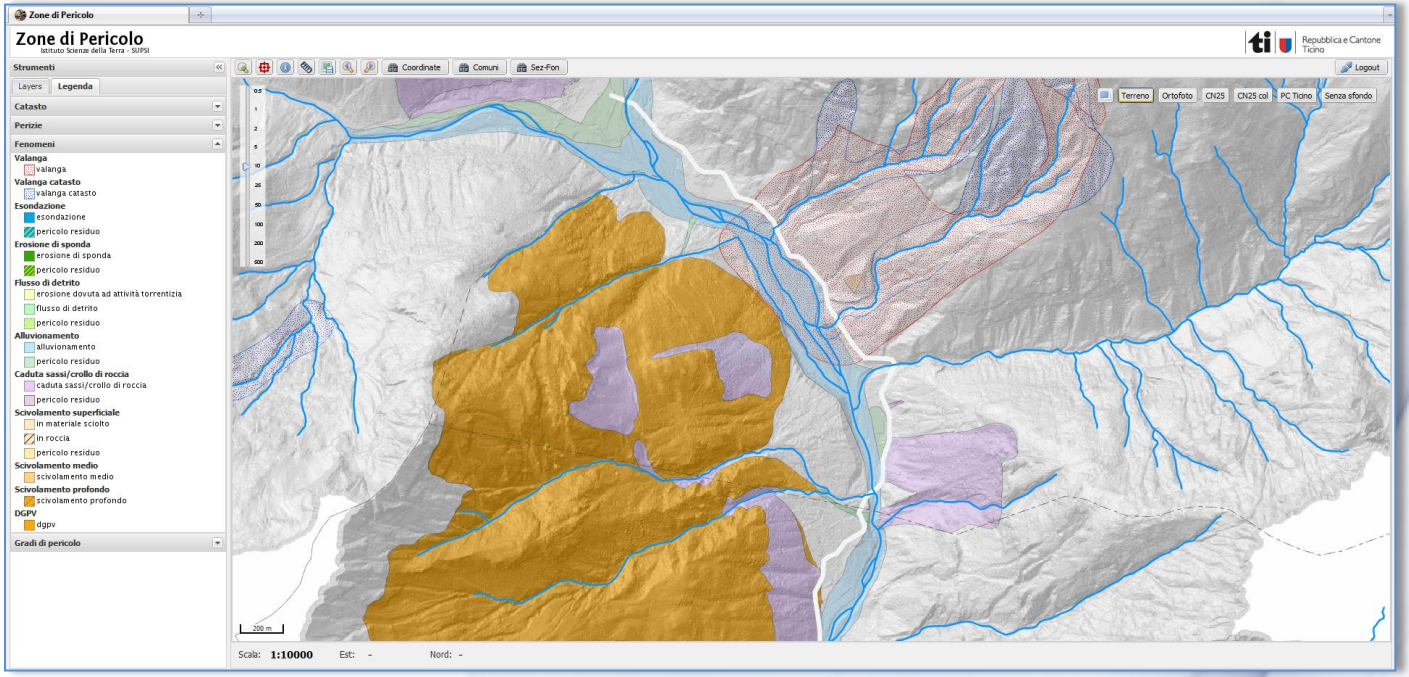
Fields of activities

[intro]



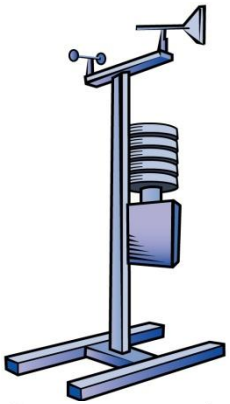


OGC implementations

[intro]

GeoServer

Geografical data serving



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SOS

IST

Sensor Observation Service

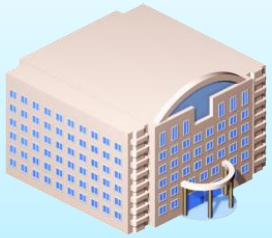
Monitoring data

PyWPS

ZOO

Data processing service

Data Security
[intro]



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Public data

Sensible data

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Security issues with OGC standards

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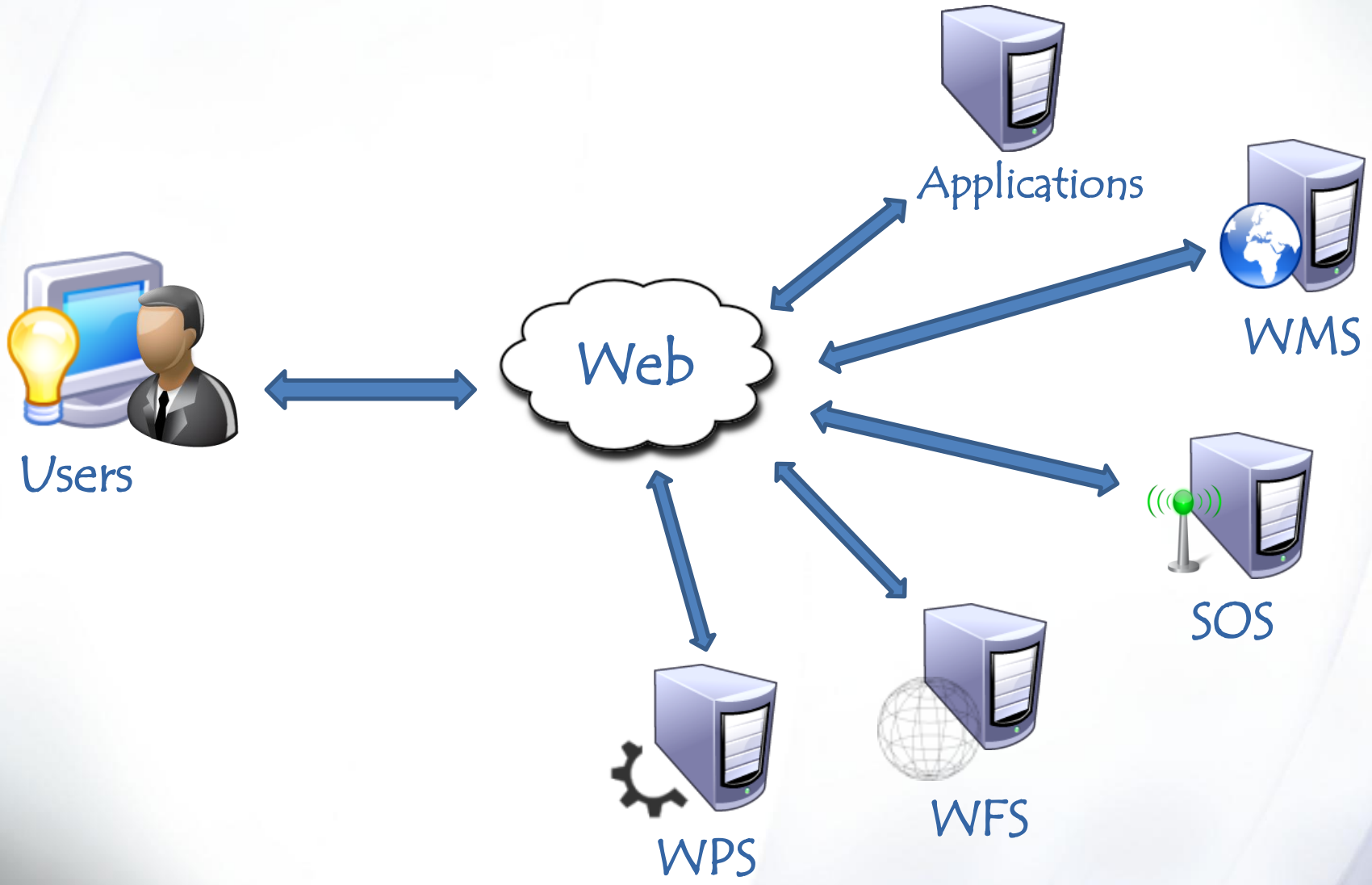
Which security implementations to use?

[security issues with OGC standards]



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Security with GeoShield

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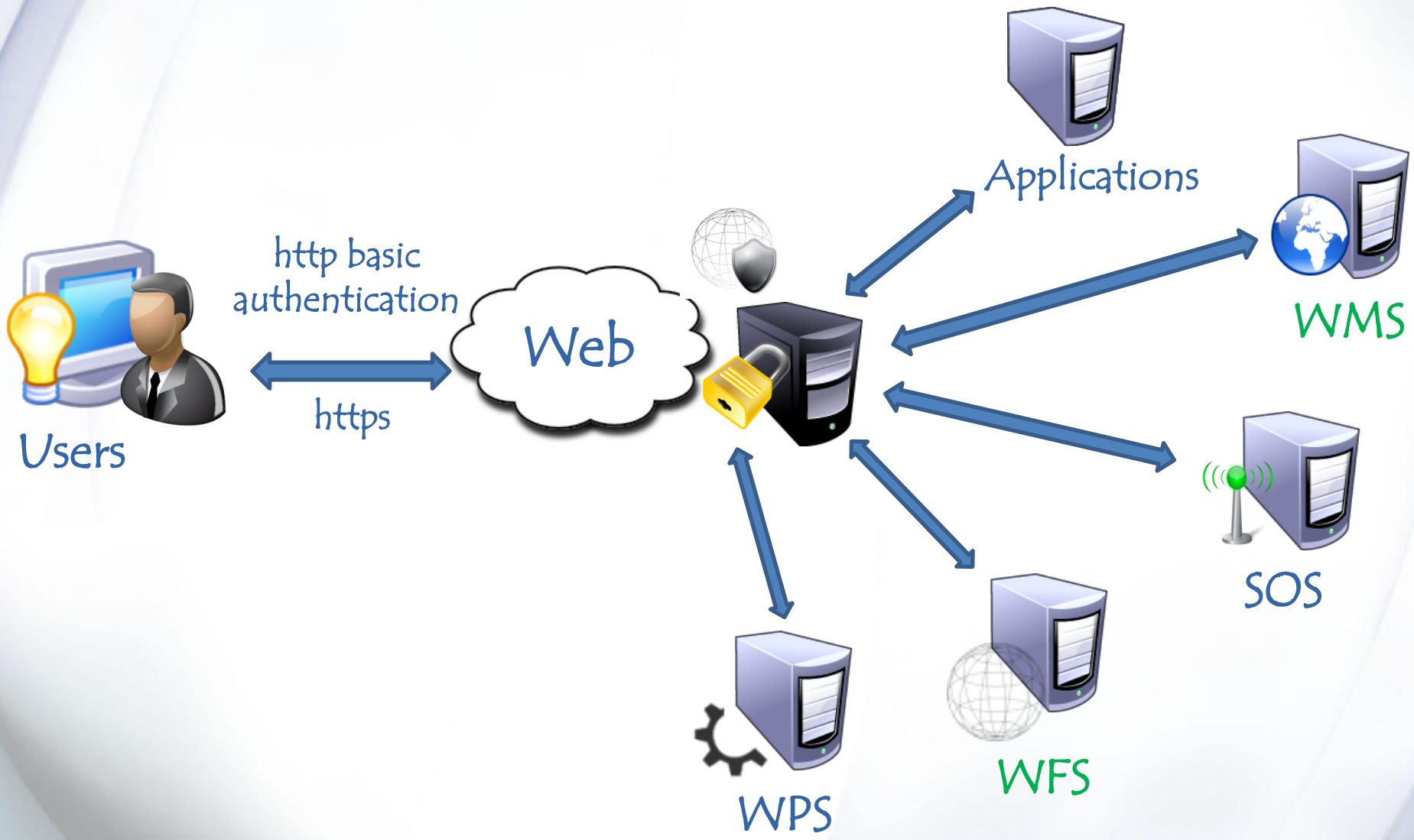
Security with GeoShield



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Technologies and design

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Technologies

[technologies and design]

Server side

- Java Servlet:
  - Handling HTTP request and response
- GeoTools 2.6.5:
  - Conversion of CQL to OGC:FILTER
  - filters aggregation
  - filters evaluation
  - Encoding/decoding OGC request /response
- Java Persistence Api (with EclipseLink 2.0.0):
  - Data manipolation
- PostgreSQL 8.4 database
  - User and group permission store

Technologies

[tecnologies and design]

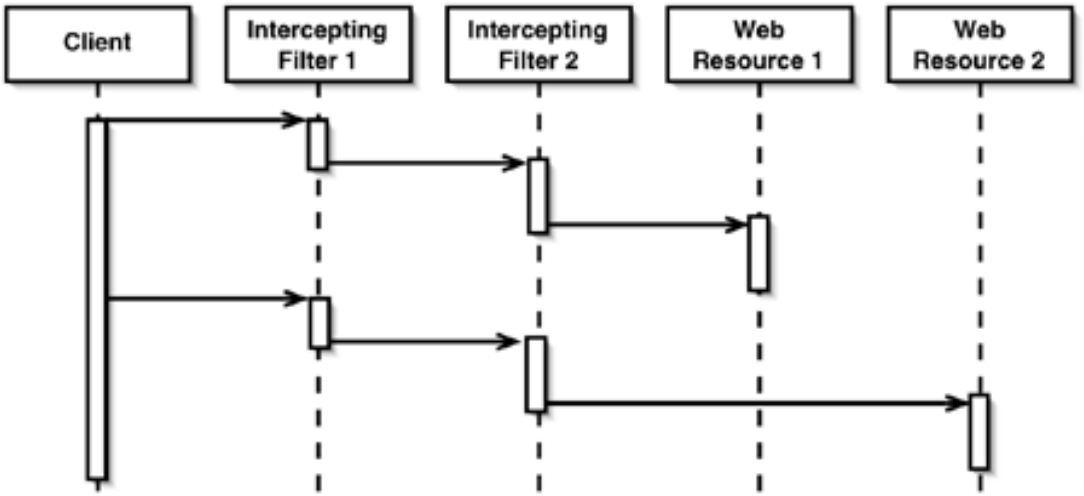
Web Admin

- Desktop Style (Sencha Extjs)
  - Users and groups definition
  - Services initialization
  - Features definition (Layers)
  - Filters definition

Design

[tecnologies and design]

Intercepting filter pattern:



- Modularity
  - Easy to add new ogc security implementations
- HTTP redirection
  - login pages
- Pre-processing e post-processing
  - Active modification of user request and services responces

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Web administration interface

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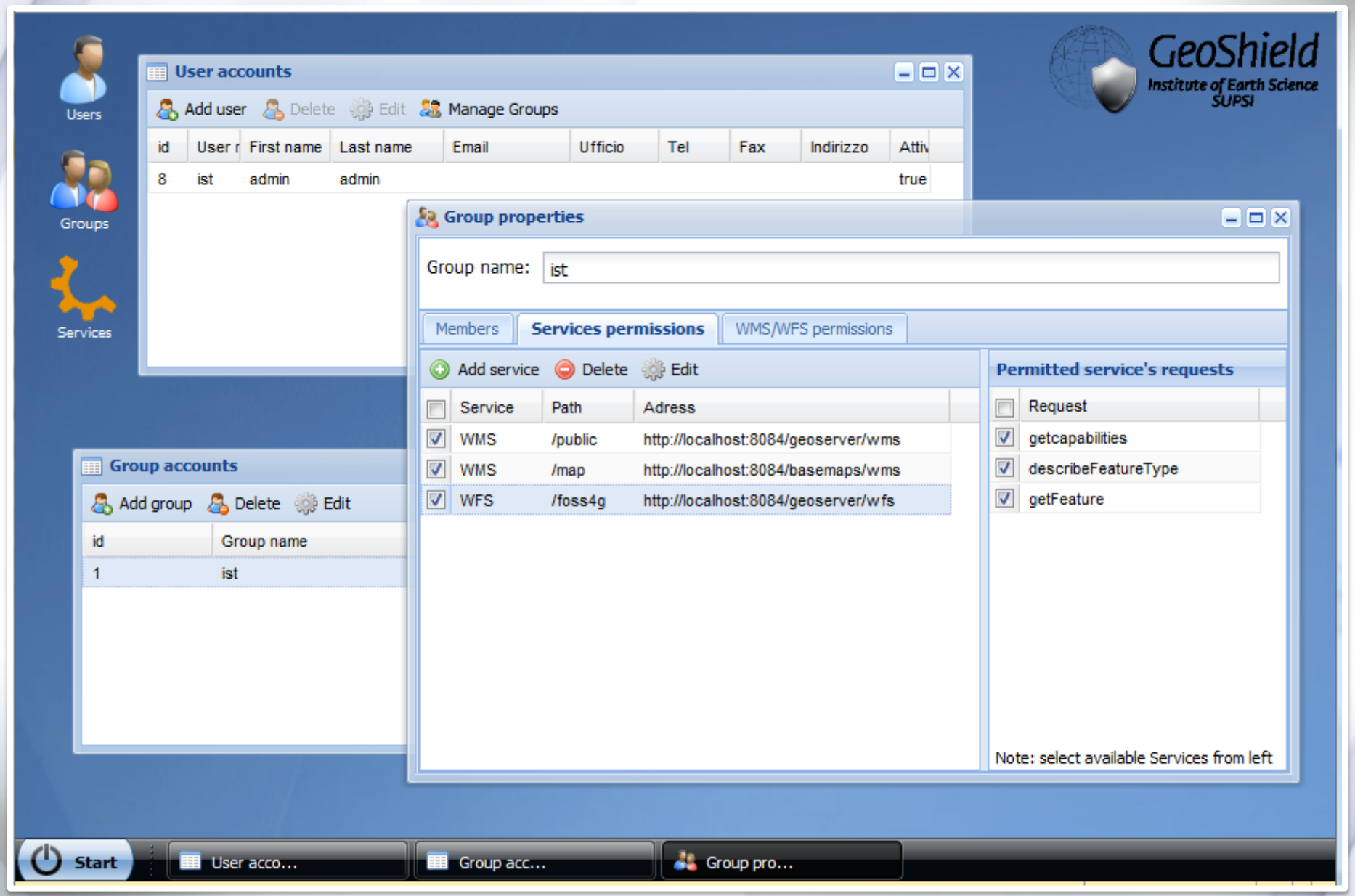
Web administration interface



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WFS security

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The new WFS module

[WFS security]

Working components

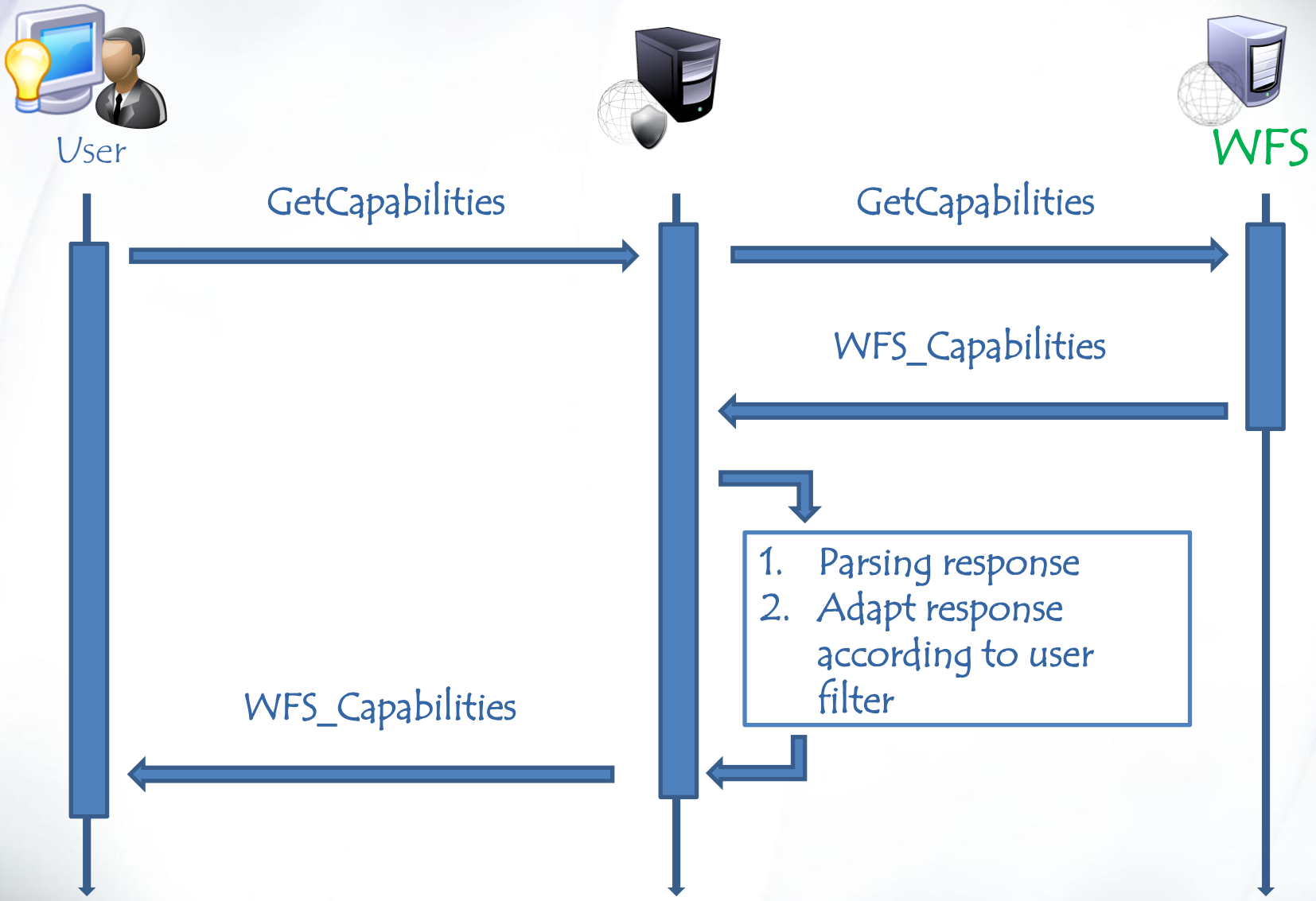
- WFS version: 1.1.0
- WFS BASIC profile:
  - GetCapabilities
  - DescribeFeatureType
  - GetFeature
- OutPutFormat: GML

Developing

- WFS version: 1.0.0
- WFS Transactional profile
- OutPutFormat: shapefiles, JSON

How it works

[WFS security]



How it works

[WFS security]

User

WFS

GetFeature

Inject defined filter

GetFeature

FeatureCollection

1. Parsing response
2. Adapt response according to user filter

FeatureCollection

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Demostration

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Next improvement

Ending full WFS integration

Extending security to:
- Web Processing Service
- Sensor Observation Service
- Web Application

Updating the web administration interface, integrating Opelayers for CQL filters definition.

GeoShield advantages

- Single login for multiple services
- Centralized authentication management system
- CQL filters to control the access to single layers for WMS and WFS
- OGC standard compliant (manage standard requests)
- Simple set-up and easy user permission management

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Any question?

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