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Deliverable D3.1
Title: ELDER-SPACES Middleware Platform

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Contributors:	Byte, SLG, Cybion, FTB, e-Trikala, Semmelweis

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** *Nature of the Deliverable*: P= Prototype, R= Report, S= Specification, T= Tool, O= Other

Abstract: The deliverable providesan assessment of the market possibilities for the Elder Spaces platform and services. This deliverable also provides a market survey and business models that guide to a successful commercialization of our project.

The ELDERSPACES Consortium consists of:

BYTE	**Project Coordinator**	**Greece**
ORIGO Ltd.	**Partner**	**Hungary**
FTB	**Partner**	**Germany**
e-Trikala	**Partner**	**Greece**
Semmelweis University	**Partner**	**Hungary**
SingularLogic	**Partner**	**Greece**
Cybion	**Partner**	**Italy**

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Table of Contents

LIST OF FIGURES

GLOSSARY

AAL   Ambient Assisted Living

WP   Work Package

1. Introduction

1.1 OVERVIEW

The main objective of this deliverable is the implementation of the working backend and middleware layer of Elder-Spaces platform which supports the frontend development on multiple platforms of the site's basic functionalities and the applications, and serves data for the Social Search module.

1.2 RELATION WITH OTHER TASKS AND WPS

The specifications of all the entities and services implemented in the middleware are provided in WP2. The implemented backend and middleware layers satisfy the requirements we made in WP1 and supports the further frontend developments of WP4 and WP5.

IMPLEMENTATION OF THE COMMON PORTAL API (PAPI)

1.3 SUMMARY OF THE IMPLEMENTATION

All the entities and services of the common API (PAPI) that we specified in D2.3 are implemented and tested, the middleware is ready to use.

1.4 SOURCE CODE

The source code of Elder-Spaces server including the code of the common API (PAPI) and the Activity Stream API extension for the Social Search module:

https://www.dropbox.com/s/k72zweql9oud5i4/elderspaces_server_code.zip

1.5 TEST APPLICATION

We created an API testing application where the requests and responses of the implemented API services can be tested:

- http://gadget.elderspaces.iwiw.hu/elder-oauth-test/

The possible requests and remained responses are specified in the technical appendix of D2.3.

1.6 OPERATIONAL INFORMATIONS OF ELDER-SPACES SERVER

1.6.1 DOMAIN

Elder-Spaces back-end and middleware is served by two Dom0 domains:

- *vm-e1.iwiw.hu*
- *vm-e2.iwiw.hu*

1.6.2 LOADBALANCING

Elder-Spaces platform is designed for high availability, to serve many concurrent users at the same time. In order to meet this requirement, we utilize multiple servers to support he platform. These servers execute specified functions, that we filter by the URL of the requests. This filtering and task allocation is the job of the loadbalancer.

In case of Elder-Spaces platform, the loadbalancing is served by a Cisco ACE loadbalancer with HAProxy, which is a free HTTP and TCP loadbalancing service.

The loadbalancer:

- ***lb.origoapps.iwiw.hu:80***

This is the loadbalancer of the API and the frontend applications. It monitors the 80 port and directs the requests to the right backends
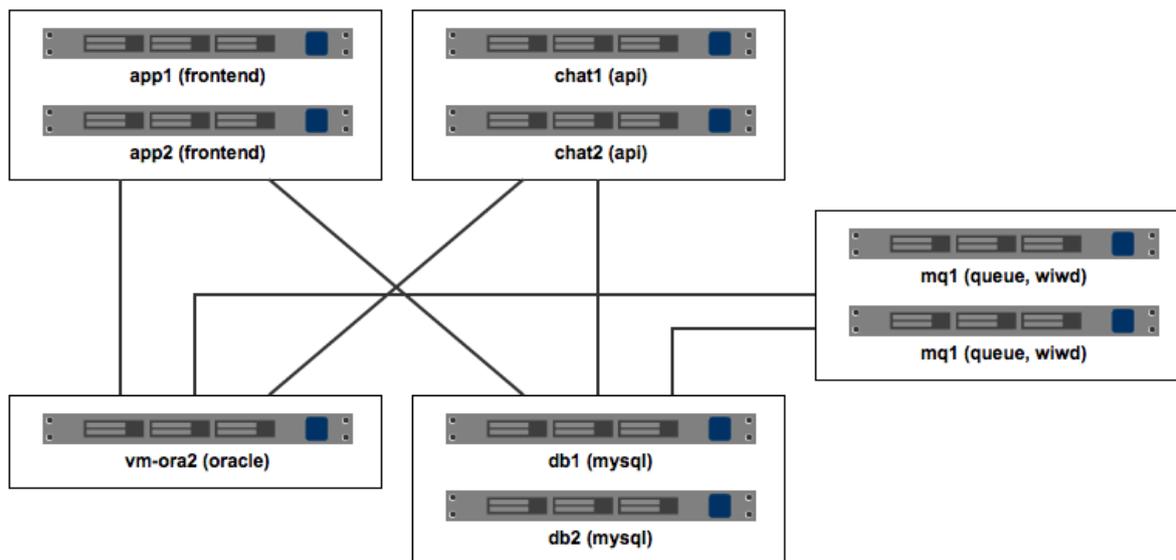
1.6.3 BACKENDS

Figure 1 - Elder-Spaces topology

- *app1.elderspaces.iwiw (HP DL145 with 4GB RAM) – apps/frontend*

- *app2.elderspaces.iwiw (HP DL145 with 4GB RAM) – apps/frontend*

- *chat1.elderspaces.iwiw (SUN X2270 with 12GB RAM) – API*

- *chat2.elderspaces.iwiw (blade (268) with 64GB RAM)– API*

- *db1.elderspaces.iwiw (HP DL145 with 4GB RAM) – MySQL DBs*

- *db2.elderspaces.iwiw (HP DL145 with 4GB RAM) – MySQL DBs*

- *mq1.elderspaces.iwiw - listener, openmq, wiwd (social graph handler)*

- *mq2.elderspaces.iwiw - listener, openmq, wiwd (social graph handler)*

- *vm-ora2.iwiw/ora-migr.iwiw (SUN X4270, 24GB RAM)*
  - Oracle DB

1.6.4   URLs

- http://elderspaces.iwiw.hu

- *http://static.elderspaces.iwiw.hu*
  - static elements

- *http://api.elderspaces.iwiw.hu – API, directed to chat{1,2}.elderspaces.iwiw*

- http://images.elderspaces.iwiw.hu *– images, directed to images.approval.iwiw*

- *http://thn1.elderspaces.iwiw.hu – thumbnails, directed to thn1.approval.iwiw*