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**Specification of the Proxy Service**

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## Table of Acronyms

OASIS	Organization for the Advancement of Structured Information Standards
ORCHESTRA	Open Architecture and Spatial Data Infrastructure for Risk Management
OSI	ORCHESTRA Service Instance
OSN	ORCHESTRA Service Network
PDP	Policy Decision Point
PEP	Policy Enforcement Point
SAML	Security Assertion Markup Language
SensorSA	Sensor Service Architecture
SOAP	Simple Object Access Protocol
WSDL	Web Services Description Language
WSS	Web Services Security
XACML	eXtensible Access Control Markup Language
XML	eXtensible Markup Language

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### 1. Introduction

The present version 1 of the Proxy Service is a new service specification that was developed during the SANY project as answer to the demand to support non-intrusive security.

This document specifies the interfaces implemented by the Proxy Service as well as their main purpose and provides a formal description of the implemented operations in WSDL and XML-Schema in conformance to the guidelines and rules of the SANY Web Services Platform defined in the SensorSA.

The relations to SANY technical requirements and progress of the specification work with respect of the individual project phases are documented in the D2.4.x Deliverables.

### 2. Overview and Architecture Outline

#### 2.1. Role and Scope of the Proxy Service

The Proxy Service acts as transparent proxy to non-security enabled web services and provides in conjunction with a Generic PEP Service non-intrusive web service security for SOAP web services. It enables both security-enabled and non-security-enabled clients to access a proxied web service via the same interface.

Each instance of a Proxy Service is specific to a proxied service which means that the interface of the Proxy Service is identical to that of a proxied service. Therefore the Interface Specification of the Proxy Interface cannot define any operations but will be generated automatically for each service type that has to be access controlled.

#### 2.2. Service Specification Summary

The specification of the Proxy Service is comprised of the following interfaces that are defined in distinct interface type specifications:

- The Proxy Interface

No formal platform-specific description of the Proxy Service is available since the Proxy Service does not provide any operations through an interface.

### **3. Context of the Proxy Service**

#### **3.1. Relations to Standards**

The Proxy Service uses the concepts and standards of OASIS WS-Security to provide the optional security information encoded in SAML in the SOAP header.

#### **3.2. Relations to Information Models**

Apart from the parameter types described in this document, there are no additional relations to information models.

#### **3.3. Relations to other Service Specifications**

The Proxy Service uses the Generic PEP Service to secure a proxied service.

## 4. Specification of the Proxy Interface

The Proxy Interface of the Proxy Service does not define operations by itself but mimics the interface of an arbitrary web service. A software component, the Proxy Generator, is used to automatically generate a service specific Proxy. Thus, the WSDL of the Proxy and the proxied services are identical and the communication between a non-security-enabled client and a proxied service through the Proxy is fully transparent. In contrast, a security-enabled client will put additional security information into the SOAP header before invoking an operation of the proxied service. The additional security information comprises a SAML token previously issued by an Identity Management and Authentication Service. Although security information is not described in the WSDL a security-enabled client can easily find out about the security capabilities of a service by evaluating its capabilities. Whether and how a service supports security is described in the capabilities of a service. The Proxy will automatically add this information to the original capabilities of a proxied service.

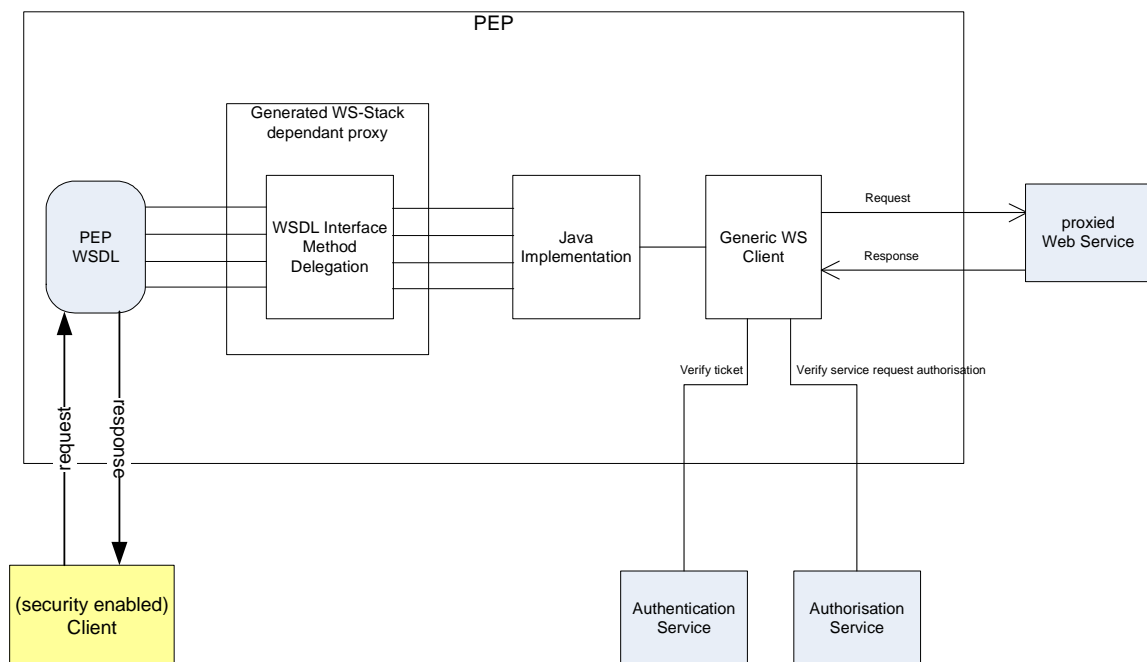


Figure 1: Collaboration with Authentication and Authorisation Services

### 5. References

- SANY-D2.4.3, 2009** SANY D2.4.3 “Sensor Service Specification V2”, SANY IP document; available from SANY website:  
<http://sany-ip.eu/biblio>
- SANY-Authentication** Specification of the Identity Management and Authentication Service (Version 1.0), SANY Consortium, Editor: Environmental Informatics Group (EIG), available from: < <http://www.sany-ip.eu/> >
- SANY-Authorisation** Specification of the Policy Management and Authorisation Service (Version 1.0), SANY Consortium, Editor: Environmental Informatics Group (EIG), available from: < <http://www.sany-ip.eu/> >
- SANY-PEP** Specification of the Generic PEP Service (Version 1.0), SANY Consortium, Editor: Environmental Informatics Group (EIG), available from: < <http://www.sany-ip.eu/> >
- SANY-Proxy** Specification of the Proxy Service (Version 1.0), SANY Consortium, Editor: Environmental Informatics Group (EIG), available from: < <http://www.sany-ip.eu/> >
- SANY-ProfileManagement** Specification of the Profile Management Service (Version 1.0), SANY Consortium, Editor: Environmental Informatics Group (EIG), available from: < <http://www.sany-ip.eu/> >