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Service Deployment Optimizer (SDO) Installation Guide

Activity 3: Service Deployment

WP 3.1: Service Deployment

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PU	Public	X
PP	Restricted to other programme participants (including the Commission)	
RE	Restricted to a group specified by the consortium (including the Commission)	
CO	Confidential, only for members of the consortium (including the Commission)	



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1 Introduction

This document includes the installation guide for the software component *Service Deployment Optimizer (SDO)*.

1.1 Glossary of Acronyms

Acronym	Definition
D	Deliverable
WP	Work Package
DO	Deployment Optimizer
SD	Service Deployer
DS	Deployment Service
DSC	Deployment Service Client



2 Service Deployment Optimizer (SDO) Installation Guide

2.1 Release information

Component Name	Release Number	Release Date
Service Deployment Optimizer (SDO)	3.0	2013-03-31

2.2 Minimal System Requirements

System Memory: 1G+

2.3 Platforms Supported

Operating systems (OS) that support JDK 1.6+.

2.4 Software Pre-requisites and Dependencies

Product	Version	Licence
TRECommonAPI	3.0-SNAPSHOT	OPTIMIS
Service-Manifest-Api	1.0.8	OPTIMIS
Sla-management-types	0.0.1-SNAPSHOT	OPTIMIS
Manifest-registry-client	0.0.2-SNAPSHOT	OPTIMIS
CloudOptimizerRESTClient	1.0-SNAPSHOT	OPTIMIS
CloudBrokerClient	1.0-SNAPSHOT	OPTIMIS
VmContextualizer	3.0.0-SNAPSHOT	OPTIMIS
DataManagerClient	0.5-SNAPSHOT	OPTIMIS
ServiceManagerRESTClient	0.6-SNAPSHOT	OPTIMIS
ServiceManagerSchema	0.6-SNAPSHOT	OPTIMIS
json	20090211	The JSON License
wsag4j	1.0.2	OPTIMIS
log4j	1.2.14	Apache V2.0
jersey	1.6	CDDL+GPL
xstream	1.2.2	BSD
commons-lang	2.4	Apache V2.0
commons-configuration	1.6	Apache V2.0



commons-io	2.1	Apache V2.0
zk	5.0.10	LGPL

Table 1: Software dependencies

2.5 Installation Instructions

There are two different options to install SDO.

1. Stand-alone Option: run as a stand-alone web application.

1. Check out the source code from the svn repository using the following commands:
 - a. `'svn co http://pandora.atosorigin.es/svn/optimis/branches/OptimisY3/optimis-parent'`
 - b. `'svn co http://pandora.atosorigin.es/svn/optimis/branches/OptimisY3/DeploymentService'`
2. Start Deployment Service using commands below:
 - a. `'cd optimis-parent'`
 - b. `'mvn clean install'`
 - c. `'cd ..'`
 - d. `'cd DeploymentService/SDO-GUI'`
 - e. `'./runserver.sh'`

2. Container Option: deployed in web containers, e.g., Tomcat server.

1. Get the SDO artefact using the one of the following options:
 - a. Download from the artifactory repository:
<http://optimis-artifactory.atosorigin.es/artifactory/libs-release-local/eu/optimis/sdo/SDO-GUI/3.0/SDO-GUI-3.0.war>
 - b. Build the artefact using source code:
 - 1) Check out the resource code from svn repository as described in the previous section.
 - 2) Build the artefact using the following commands:
`'mvn clean package -Dmaven.test.skip=true'`
2. Deploy the artefact in web application containers, e.g., Tomcat server.
 - a. Rename the artefact, e.g., `'sdo-gui.war'`. (Optional)
 - b. E.g., drop the artifact in `$TOMCAT_HOME/webapps/`

2.6 Getting started



2.6.1 Using the Software

Once the artefact is installed, the Deployment Service is started. Users can use the service using one of the two options:

Web GUI Option: GUI:

1. Open web browser and access SDO service via SDO endpoint url.
 - a. If SDO is installed using **Option A**, the url is '<http://localhost:8087/>'.
 - b. If SDO is installed using **Option B**, the url is '<http://localhost:8080/sdo-gui/>'.

REST API Option: SDO Client API usage:

1. SDO service available via a REST-style client api, there are two options for the usage:

Option a. add the following dependency locally:

```
<dependency>
  <groupId>eu.optimis.sdo</groupId>
  <artifactId>DeploymentServiceClient</artifactId>
  <version>3.0</version>
</dependency>
```

Option b. Download the DSC artifact from the artifact repository:

<http://optimis-artifactory.atosorigin.es/artifactory/libs-release-local/eu/optimis/sdo/DeploymentServiceClient/3.0/DeploymentServiceClient-3.0.jar>

add this jar file to the local classpath.

2. Then users can use it as follows (an example for AC federation):

```
String sdoURL = "http://optimis-spvm.atosorigin.es:8087"; //where the SDO is running.
DeploymentServiceClient sdoClient = new DeploymentServiceClient(sdoURL);
String manifestXML = "XXX"; //Manifest in XML format
String objective = "COST";
String result = sdoClient.outSourceVMs(manifestXML, objective);
```

2.6.2 Configuration

A default configuration file should be located at `"/opt/optimis/etc/sdo/sdo.properties"`. Meanwhile, users can specify their own configuration to run SDO. In this configuration file, require endpoints for TREC, Service Manager, IP discovery, etc., should be specified. More detail is listed below:

Field	Default value	Semantics
configuration.refreshperiod	30000	Configuration file monitor interval (in ms)
ip.discovery.host	localhost	IP Discovery endpoint host name



ip.discovery.port	8080	IP Discovery endpoint host port
vmc.config.file.path		Configuration file location for VM Contextualization component
service.manager.host	localhost	Service Manager endpoint host name
service.manager.port	8080	Service Manager endpoint host port
is.service.bursting.case	false	Specify if SDO is running for Cloud bursting case
manifest.repo.url	http://localhost:8080/manifest-registry/RegistryService	Manifest Registry Endpoint url
eu.optimis.localprovider.name	atos	Specify the name of local provider
is.check.legal.ignored	false	Specify if CheckLegal operation would be ignored during the deployment process.
is.trec.call.skip	false	Specify if TREC calls operation would be ignored during the deployment process.
sp.trec.db.url	jdbc:mysql://optimis-database:3306/sptrecdb	Database url for TREC DB SP
sp.trec.db.username	trecdb_usr	Username for TREC DB SP
sp.trec.db.password	L84VA8cStVf5bV7q	Password for TREC DB SP

Table 2: Configuration details.