

Install Guide

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Chapter 1. Purpose

This guide has been written to install AONS from a deployers perspective. We concentrate on deploying AONS via the release package, not the true source structure. The release package is an "almost" complete installation structure: all it really requires are deployment specific settings relating to the database connection.

Most of this guide is really just about going through the motions, ensuring that you have an adequate database setup available.

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Chapter 2. Requirements

AONS requires the following pre-requisites in order to be installed:

- A compatible database
- A compatible JVM
- A compatible server
- An Ant installation

A Compatible Database

AONS uses JPA (REMEMBER TO LINK TO TECHNOLOGY SECTION), which is intended to provide a common abstraction layer for Java programs and their underlying persistence within a database. The current version of JPA is 1.0 and during the development of AONS we tried a few different implementations, eventually settling on Hibernate Entity (3.3.1 GA). This seemed to be the most stable so we're still using it. In terms of database support it should cover most types, provided configuration details are given and the correct driver is given.

Below is the theoretical table of tested database support within AONS (via Hibernate/Hibernate Entity):

- Oracle 8i, 9i, 10g
- DB2 7.1, 7.2, 8.1
- Microsoft SQL Server 2000
- Sybase 12.5 (JConnect 5.5)
- MySQL 3.23, 4.0, 4.1, 5.0
- PostgreSQL 7.1.2, 7.2, 7.3, 7.4, 8.0, 8.1
- TimesTen 5.1, 6.0
- HypersonicSQL 1.61, 1.7.0, 1.7.2, 1.7.3, 1.8
- SAP DB 7.3
- InterSystems Cache' 2007.1

For more information please see this link [<http://www.hibernate.org/80.html>] for more details at Hibernate's website.

Currently, we have only been able to test AONS against PostgreSQL 8.2, so if any of these databases don't work as expected, lodge a bug report.

Once you have chosen which database you will use with AONS, you need to create any database structures which will support your DDL. We don't directly create DDL (JPA does this for us), but depending on the database type and setup you may need to create one or more of the following:

- A database instance
- A database schema

- A database access role/user

Creating these structures is out of scope for this document, please refer to your accompanying documentation for your particular database. Whatever your database, as long as AONS can create database tables/sequences with a specified JDBC connect URL, username and password the application should be able to run.

A Compatible JVM

AONS has been developed and tested against the Java SDK version 1.5.0_12. AONS should work with all version after this, but if it doesn't, lodge a bug (see Lodging Bugs)

A Compatible Application Server

In theory, any compatible v2.4 servlet container should suffice. We have only tested against Tomcat 5.5.20, so maybe there are other niggles with other containers... but I'd doubt it. So, have a go, and create a bug report if it doesn't work (see Lodging Bugs).

An Ant installation

Whilst the main development build is pretty complicated so support for Ant 1.6+ should be mandatory, the build of the release package is pretty simple and would be Ant support would be okay down to 1.5 (just to confirm: if you checked out the

Still, have a go and lodge a bug (see Lodging Bugs) if it doesn't work.

Chapter 3. Fresh Installation Procedure

Here is the set of steps needed to install AONS:

1. Download the latest AONS release from Sourceforge [http://sourceforge.net/project/showfiles.php?group_id=201332]
2. Unzip the latest AONS release to a directory of your choice which will create the subdirectory `aons-${version}`. This subdirectory will further more be referred to as `release-base-dir`.
3. Download the JDBC driver for your database (not needed for PostgreSQL 8.2)
4. Add the JDBC driver to `${release-base-dir}/lib` the library directory (not needed for PostgreSQL 8.2)
5. Create your index directory; it can be anywhere on disk, but will need to be readable/writable by the tomcat process (very important to check with Linux and Unix deployments. If it is not writable, Compass/Lucene will not detect this and fail *quietly*).
6. Configure the following in the `${release-base-dir}/build.properties` file:
 - `db.driver`: The database driver within the JDBC driver you have included (org.postgresql.Driver for PostgreSQL 8.2)
 - `db.url`: JDBC connection URL
 - `db.username`: The database username
 - `db.password`: The database password
 - `index.location`: The folder location (which must exist) where Compass/Lucene will create their index files.
 - `deploy.dir`: The web application directory in your servlet container
7. Run `ant deploy` which will build create the final web application (with site specific variables and database drivers) and deploy to your web application directory.
8. Test the installation has started by bringing up the main page (`${server path}/aons`, an example of this is `http://localhost:8080/aons`)

Chapter 4. Upgrading AONS

AONS is still in it's first Beta release so upgrading hasn't been a huge priority. Still, upgrading AONS within the Beta release should just be a case of going through the steps mentioned in the Fresh Installation Procedure.

As we never explicitly wipe the DDL, the new build should, via JPA build any missing data structures and augment any missing. This is a far from perfect procedure however, and you can rely on the fact that future versions of AONS will look at a more careful upgrade of previous data structures.

Chapter 5. Known Issues

Deploying Compass and Lucene

If you are deploying AONS onto an already deployed application server with other web applicatin, you may want to investigate whether any of those other applications utilise Lucene.

The reason for this, is Lucene has an odd configuration mechanism for it's segment reader which utilises a system property. As Compass used in AONS may set this to it's own custom segment reader, the other application starting up may fail. This is not a problem with Compass but with Lucene.

Workarounds? I'd create a second servlet container instance to avoid the issue until Lucene changes it's configuration to be a bit more fine grained and compatible with different values within the same JVM.

For more information please see here [<http://aons2dev.blogspot.com/2007/07/lucene-issue.html>].

Chapter 6. Lodging Bugs

For now, bugs can be lodged via Sourceforge's bug tracking system found under the main AONS project page (<http://sourceforge.net/projects/aons>).

I wouldn't be surprised if this changes in future (as the APSR/AONS steering committee have not voiced their direction). If it does change, this guide will be updated.