# Middleware VM instructions

### Import the virtual machine

You need to install VirtualBox.

Import the OVA file.

Allow enough resources for the machine:

- 2 VCPU is good
- 2Gb ram at least, more if possible.
- 128Mb video memory does not hurt

Do not forget to check the 3D acceleration, otherwise the system is very slow.

### Working with the VM

There is a link called « StartMiddleware.sh » on the Desktop, double click and wait for everything to start, it may take some time.



#### This link starts:

- The glassfish server and database (Derby)
- Firefox -> Glassfish admin panel
- Eclipse with existing projects

### What is on the VM

Hello World: self explanatory

**Bank Transfer:** Everything you need has been installed. The Bank transfer has been modified to work, do not use the classes provided in the PDF, it's fine like that. You can test it through the web service and watch the data from Eclipse data source explorer, or you can use Squirrel SQL to navigate the database.

Very important: The project does not need JPA facet. In fact the JPA connection is provided by the container (Glassfish). For this purpose, the connection pool has been defined, you can check by yourself within the admin console in Firefox and in the domain.xml in glassfish/domain/domain1/config

To provide the entity manager to the beans we proceed by dependency injection :

public class StatelessSessionBean implements StatelessLocal {

@Resource

private EJBContext context;

@PersistenceContext(type = PersistenceContextType.TRANSACTION)

private EntityManager em;

#### **Project**

A project called « middlewareproject » has been created, it is configured with all dependencies so that you can start your own project.

## **VM** Organization

All the files are located in /home/middleware/Middleware:

- Glassfish
- Samples
- Eclipse
- Workspace

You can acces it directly from the file browser, there is a shortcut in the left bar.