

Things You Can Try at Home or Office

This presentation was about two ERP's and a framework to transition a 40 year old ERP to a Next Generation ERP. Gone are the days when system development meant learning COBOL and one operating system very well. It almost seems like today there are more choices for building applications than there are applications to build. Most developers get "stuck in the past". That means different things to different people. For example, some people have COBOL skills and others may have Visual Basic 6 skills. Yet today there are languages such as JAVA, SCALA, Groovy, Ruby on Rails, etc. There are also a lot of different classes of "frameworks"; .NET, J2EE, JEE, Python, etc. Today there are also, many different types of databases SQL (Oracle, MSSQL, MySQL, IBM DB2, etc.) as well as the endless and increasing number of NOSQL databases.

Software development has evolved from the days of the punched card to, dumb terminals to web browsers and various mobile devices. Software architecture has changed significantly as well. That said, Figure 1 can be used with only slight changes to represent a number of different approaches to software development frameworks. For example, if you change the Middle tier with a .NET server that exposes a REST API and you change the database to MS SQL Server you get what is typical of many Microsoft based solutions. In other words, the JavaScript (AJAX) client that works in browsers and mobile devices with a REST API seems to be the closest thing to a defacto standard that exists today.

That said, a lot can be learned by studying a complete framework with applications that are modern by today's standards. Even if you believe that .NET is the only way to go, you might just find yourself developing clients with HTML5, Angular.js and Backbone.js.

About this Presentation

We said the objectives of this presentation were as follows:

- Introduction to modern architecture

 - Background and Overview

 - Axelor Business Suite Demo

 - Axelor Development Environment Demo - BPM

- Before and After – Case Study

 - Demonstration of Before

 - Demonstration of After

- Architecture of our approach and solution for the Legacy application

- Things you can try on your own

This section uses tools and products introduced in the presentation as learning aids to build upon the technical knowledge of the reader. That is, we take a real set of Next Generation Applications, Axelor Business Suite (ABS), and its component parts along with the framework used to develop ABS which is called Axelor Development Kit.

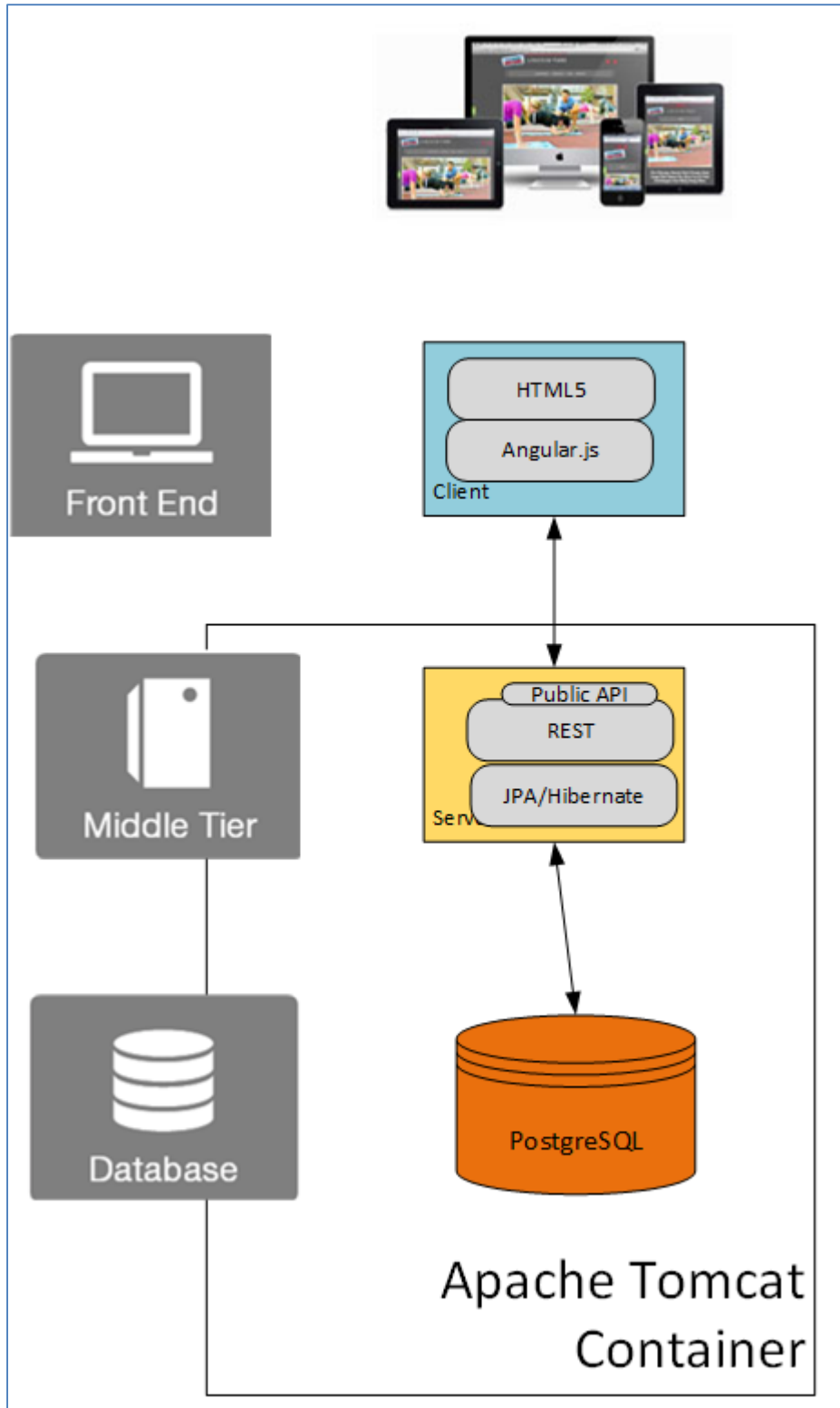


Figure 1 - Modern Software Architecture based on JAVA and JEE

About Axelor

The Axelor platform is a rapid development framework for building business applications based on Java technology. It is easy to learn, customizable and saves critical time for complex applications. The application code is object-oriented, allowing you to use the standard Java APIs. The Axelor platform uses an approach to model-driven development, where the heart of your application is Java classes that model your business code. This means that you can stay productive while maintaining a high level of encapsulation.

Axelor Business Suite is an open source suite of integrated business applications that is fully modular, ergonomic and scalable. From simple CRM or SIRH, up to inventory management and production, Axelor covers all the functionality of an ERP.

About Transformix Tools

The Axelor platform is focused on new development. Transformix adapts the Axelor tools for use by organizations with existing legacy applications.

Learning About Modern Development Using Axelor and Transformix Tools

What follows is a progressive introduction to modern development from the top down. That is,

1. We first examine Axelor Business Suite in the **cloud** to see an application that most of today's users would be comfortable with.
2. Next we install a local copy of ABS and study it and introduce BPM for software development.
3. In the third part, we look at the Axelor Development Kit and build a simple application from scratch.
4. Next we use Transformix tools to use Axelor to build an application with an existing database.
5. Finally, for the stout hearted, we delve into the underlying architecture components of Axelor Development Kit.
6. As a supplement, we present some details about component parts used to create of the Legacy Applications we use

The reasons for this structure are twofold. First, to provide a gentle introduction to modern application architecture, and secondly, to show that it is possible to use this new technology without getting lost in the weeds. It seems like most of the literature on these subjects immediately descend into showing how to code these types of applications. If the Axelor platform shows anything, it shows how most people do not need to code so much to get the web and mobile applications that are integrated and useful.

Step 1 – Use the Axelor cloud demo

If you are interested in seeing what a next generation cloud-capable suite of business software is like, visit the Axelor Business Suite site.

<http://www.axelor.com/suite/>

Try the demo

<http://www.axelor.com/try-our-demo-for-free/>

See the video

<https://www.youtube.com/watch?v=6MShqGydkp8>

Step 2 – Desktop Install of Axelor

For those of you who would like to do a local install of Axelor, the easiest way to do it is with the auto install version of the application. There is one for Windows, Linux and OS/X. The main reason using this a quick and easy way to install a local copy of Axelor is that the installer installs the Axelor dependencies along with Axelor Business Suite.

For example, I installed ABS in c:\java_apps. C:\java_apps\Axelor Business Suite\opt. Note that the sub directories under opt are the

- Jdk – JAVA development kit
- pgsq1 – PostgreSQL
- tomcat – Apache Tomcat application server

The application simply installs and runs.

You can find it here:

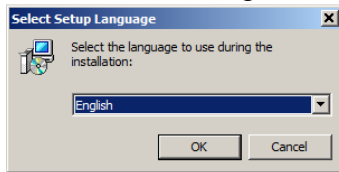
<http://download.axelor.com/abs/autoInstallerFR/axelor-business-suite-4.x.x-fr-windows-x64.exe>

Unfortunately, as of this writing only the French version of the auto installer is available. Still, English language users can make it work with a simple configuration change after install. After installation, you must logon and as the administrator, include the English language modules then restart ABS.

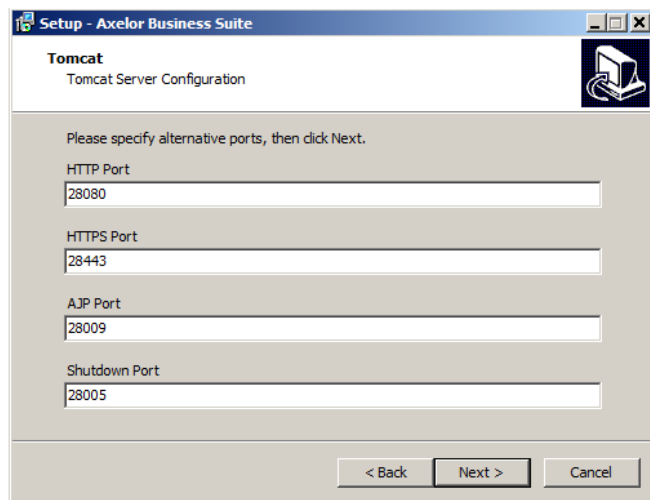
Here are the steps:

- 1) Download and double click the axelor-business-suite-4.x.x-fr-windows-x64.exe file.

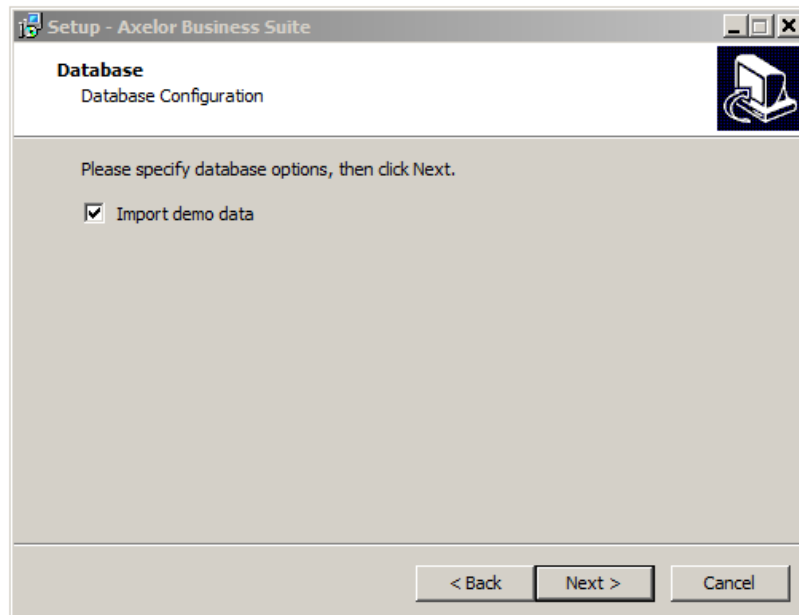
2) Choose English as the setup language



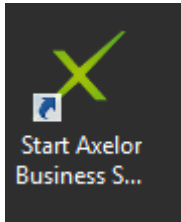
3) Select the ports to use. I like to use something other than the default 8080,8443,8009 and 8005 in order to avoid conflicts with other software that might already be installed on the computer.



4) Specify the database port to use. I use 5440 and Choose "Import demo data"



- 5) If the server does not start automatically, start it from the start menu. Look for Axelor Business Suite and pick Start Axelor Business Suite.



The first time startup takes maybe 20-30 minutes as it loads the database.

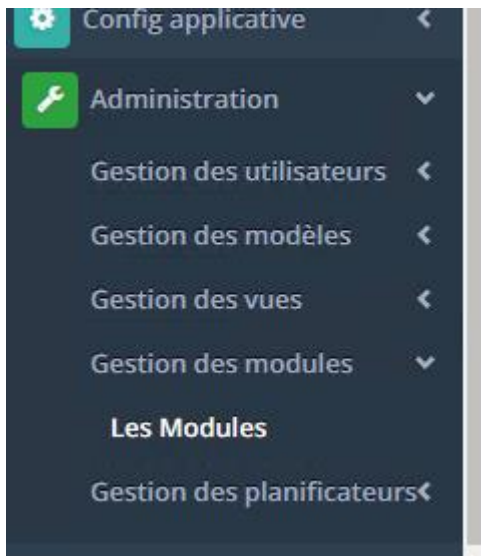
- 6) Log on to the server using:

Login: admin

Password: axadmin

Note that the password will change when we configure the English language modules into ABS.

Now the application will start but it is in French. Navigage to Administration/Gestion des modules/Les Modules



- 7) In the list of modules to the right of the menu you will see that the English languages module has not been selected. Go on and select it.

 axelor-demo-en	Axelor :: Demo EN	4.0.0
 axelor-demo-fr	Axelor :: Demo FR	4.0.0
 axelor-erp	Axelor :: ERP	4.0.0
 axelor-exception	Axelor :: Exception	4.0.0
 axelor-human-resource	Axelor human resource	4.0.0
 axelor-l10n-en	Axelor :: l10n EN	4.0.0

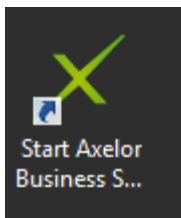
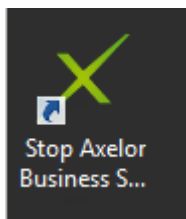
8) Once you see the screen below you can log off, stop and then restart Axelor Business Suite.

Module

Libellé	Nom
Axelor :: Demo EN	axelor-demo-en
Version	Dépend de
4.0.0	axelor-core,axelor-exception,axelor-message,axelor-base...
Installé ?	En Attente
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Supprimable ?
	<input checked="" type="checkbox"/>

Description

9) Once you see the screen below you can log off, stop and then restart Axelor Business Suite.



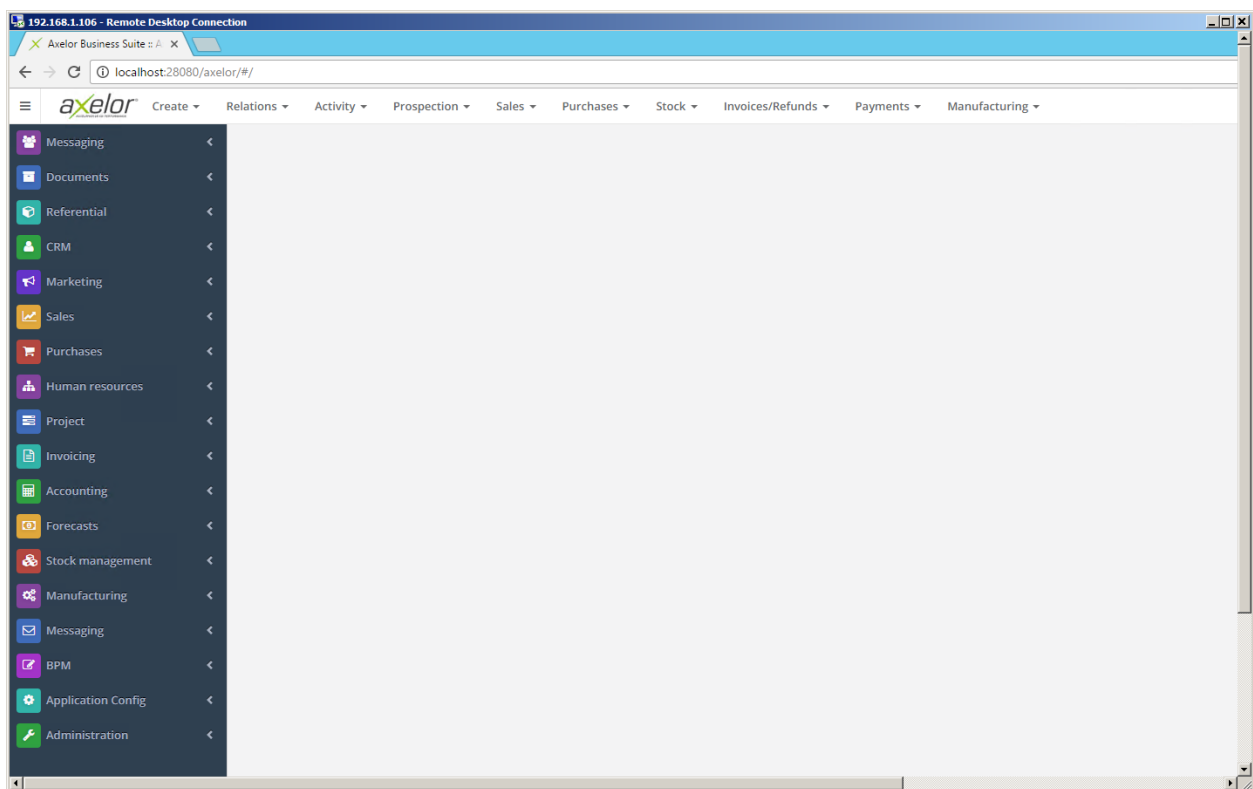
10) The application will start and load the new modules with associated data.

Load of database and new modules takes another 20 minutes.

Note the password was changed by the installer.

Login: admin

Password: admin

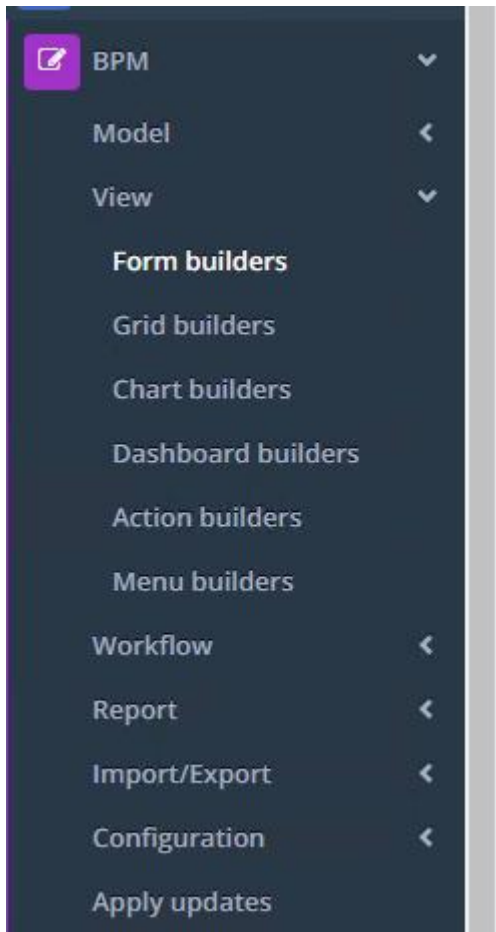


11) Try the Axelor Business Suite Demo

ABS

12) Try out the BPM

BPM



Step 3 – Axelor Development Kit

The Axelor Development Kit is a business application development framework for Java. Please use Axelor documentation to get started with the ADK.

<http://docs.axelor.com/adk/latest/welcome/index.html>

Step 4 – Existing Databases

Transformix has created a modified version of the Axelor Development Kit that allows the use of an existing PostgreSQL database. Please contact cfinley@xformix.com to obtain a demo copy along with the PostgreSQL version of the Northwind database.

Step 5 – Explore Axelor Stack-like Underlying foundations

If you are interested simply in building next generation applications the easy way, the exercises above should get you started. Axelor hides a lot of detail from the developer. Still, some people will want to know how to do it all from scratch. There are possibly hundreds of articles that describe how to do the detailed work. Here is one example.

<http://crunchify.com/how-to-build-restful-service-with-java-using-jax-rs-and-jersey/>

Step 6 – Examine Some Legacy Application Development Internals

For what it's worth, Transformix has available an example of the kind of effort required to build a TimeEntry application using the tools and techniques from the HP 3000/COBOL/VPLUS/IMAGE environment in order to contrast it with the Axelor example shown in the Human Resources TimeEntry-form in ABS. If anyone would like a copy of that, please contact cfinley@xformix.com. Here are some random unstructured notes on the subject.

A TimeEntry Program Example

Legacy_COBOL_VPLUS_timeentry

Axelor Timeentry

Image example COBOL

<http://www.hpmmssupport.com/MPE%20Manual/5500/B3039190010.17091/52.htm>

VPLUS

<http://www.hpmmssupport.com/MPE%20Manual/5000/B3220990001.76/155.htm>