COVER FEATURE   WEB APPLICATION SERVER

Brief introduction to IBM
Websphere and BEA Weblogic

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Technologically, Websphere and Weblogic have little in common. While IBM uses tried and tested technology, BEA sparkles with the latest standards. But both have very high market shares.

Everyone knows IBM, but sometimes even IT insiders don't know the first thing about BEA Systems. Together these two companies hold a position which commands the market in the field of web application servers. BEA was only founded in 1995, but since then it has grown like wildfire. The company's success was mainly based in the first instance on the transaction platform Tuxedo, while Weblogic is relatively new to their range.

Websphere: Mixture with Apache IBM's WebSphere application server is currently available in version 3.5, but so far for Linux it remains at version 3.02 (the version for IBM's mainframe operating system OS/390 is no more advanced either). Websphere comes in three versions (*Standard*, *Advanced* and *Enterprise*). The range of functions varies according to the version. While the Standard version comprises Web server, Servlet-engine and JSP environment, the Advanced Edition also offers an EJB run-time environment. A comprehensive CORBA solution is however reserved for the Enterprise Edition. But this is mainly implemented in C/C++, so that both integration with Java, as well as porting onto various hardware platforms is difficult.

The web server from Websphere essentially consists of Apache (the Apache licence allows this), while the Servlet- and JSP-Engine are both proprietary. This is also where the problems start with Websphere. The standards are supported in completely obsolete versions: in the Servlet-API this is only version 2.1, and in the JSPs it is versions 0.91 and 1.0. With the EJB specification it's even worse. While many servers are already implementing parts of the *"Public Final Draft"* of version 2.0 of the EJB specification, Websphere users still have to settle for version 1.0. The list of woes gets even longer under Linux, since only with version 3.5 has support for Java 2 made an appearance.

Resources guzzler

The resource consumption of Websphere on the other hand is enormous. As a minimum equipment requirement, 256 Mbyte is recommended, for a stand-alone solution for developers, including development environment (VisualAge) and database (DB2) 512 Mbyte is just the beginning of compatibility. According to reports from users the stability of version 3.5 is poor compared with 3.02.

With all these rightly-criticised points, one wonders why Websphere is used at all. One aspect which should not be overlooked is the fact that Websphere is a product for big business, and that's where as a rule people sitting on decision-making committees have grown up with IBM as a reliable partner. The risk that IBM's applications server will disappear as the result of stockpiling is relatively low at this point (so something like the case of GemStone, which was bought up by Brokat, is not going to happen). But notwithstanding these ruminations, which prove the excellent marketing of IBM, there are also definite technical reasons for implementing Websphere.

Websphere's strengths are its integration of the development environment, *"Visual Age for Java"*, with various code generators and a good environment for debugging. Even if the latest EJB specifications are not supported, IBM has implemented its own proprietary additional system anyway, which provides the developer with a powerful persistence framework. This also includes the corresponding database tables. Equally, the reverse path for existing tables is possible.

The last point leads to another good argument for Websphere, namely the integration of legacy applications via large computer systems like CICS or IMS. Other commercial servers, like BEA's Weblogic Server, though, offer similar features via add-on components.

Version 4 of Websphere has already been announced. Here at last the latest standards should be implemented. Also the remaining APIs from the J2EE specification, in particular JavaMail, should be implemented. It is to be hoped that by that time a current Linux version will also be available.

BEA Weblogic Application Server

BEA's Weblogic Server is available for download in a *"Public Beta 2"* of version 6, from the Web sites of BEA. Unfortunately here again the Linux user will have to settle for the older version 5.1.4. This version can also be downloaded for evaluation purposes after a registration. It is understandable that in a beta phase not too many platforms find support, which is why a few other Unix dialects are also lacking here in comparison with the long list of platforms supported by the latest version.

The Weblogic Application Server is enjoying wide distribution and the high version number also shows that already a great deal of practical experience of the product has been included. Version 6 can be described as *"State of the Art"*. The implementation of the complete J2EE specification is available and the management of cluster-capable application via modern Web-based tools is possible. The cluster architecture (both on the Web and on the object server site) guarantees a high level of scalability and availability. Even the EJB 2.0 specification is supported.

The Weblogic Server supplies a Web container (for HTML/XML pages, Servlets and JSP), an EJB container (as run-time for the Enterprise JavaBeans) and the services necessary in the business domain. Apart from its own web server, existing servers such as Apache, IIS or Netscape can also be integrated. And integration into development environments such as WebGain Studio (formerly known as Visual Cafe) from Symantec, VisualAge or JBuilder is also possible.

Security with respect to the "outside" is made possible via SSL-connections, and on the the "inside" firewalls do not hinder the management of the server, as corresponding HTTP/HTTPS tunnels are available. Furthermore modules are available as add-on products, such as for mainframe access, the personalisation of Web sites or access to standard applications. ∎