e-Commerce, a New Strategy for Marketplaces

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Abstract: - The recent years has forced many e-business outfits to either shut down or come up with a new strategy that works in a cost-conscious marketplace. So, starting an e-business right now, may seem daunting, but if you make the right decisions in your design and setup, you'll certainly improve your chances for success.

The system presented in this paper can handle offers and orders via Internet. Quantities are from stock inventory or production plans. Provided one partner works with both types of quantities this must know that they are managed separately.

For planned quantities, time horizons and levels are possible to select. The time horizons may be: present and next. The levels may be: month, quarter and year. Every level supports sub-intervals of time, namely: decades, months and quarters correspondingly. The quantities set is kept coherent over time horizons and levels.

Assistance for editing offers / orders is provided, with information about necessary / available quantities and cumulated offers / orders at a given moment.

The system uses secure socket connections (SSL) to transmit all sensitive information during the ordering process.

Keywords: - e-commerce, secured socket connections, client-server application, software tools, real-time transactions, distributed database

1. Introduction

The paper presents a set of instruments realized at The National Institute for R&D, Bucharest (IC). The system is used for developing transactional systems that manage distributed data used in e-commerce applications.

The system is a complete commerce platform that can be easily customized to rapidly deploy adaptable and personalized e-commerce applications that create a sustainable competitive advantage and accelerate response time to changing market conditions. It includes commerce templates, webflow and pipeline managers that separate the presentation layer from business logic, commerce pipeline components, administrative tools, personalization and content management. It is an open market electronic commerce platform that allows implement business-to-business e-commerce systems on the Web. It help quickly deploy business-to-business e-commerce systems that link existing back-end applications, databases and knowledge workers into automatic and flexible electronic collaborations. Partners collaboration has a strong focus on opportunistic co-operation and supports building systematic collaboration.

2. The System Architecture

The system environment can be split technologically into the following modules:
- The Database design technologies.
- Implementation technologies for content providing.
- Indexing and integrating the technologies for the developed components
- Design of the Web interface

The system adopts a component-based implementation scheme. Each module designed, tested and implemented, plays the role of a unique component. This technique ensures the important goals of expandability and differentiation. The platform consists of
several databases. All of these databases are distributed. The implementation of the e-commerce system is based on distributed repository, consisting of different multimedia modules. The system aims at a series of activities to apply this scheme to different types of business areas, especially for SMEs and NGOs. The overall goal is to foster the usage of F/OSS backend platforms and services and to generate new business opportunities for the Open Source developer community. The open source-based set of tools is supposed to have a high socio-economic effect for both, the providers and users of F/OSS, with a special focus on SMEs. On the development side, the system is arranged around a few models, bringing experience and moderating integration to various end users. Scientific and technological objectives and state of the art of the system supports the migration of the business processes in enterprises and public organizations to use F/OSS. A number of F/OSS solutions are available for different purposes, however some elements are missing so that F/OSS can be used for supporting all day-to-day business tasks. The Open Source movement has to tackle some obstacles, in order to be competitive with commercial closed license solutions. First, a few critical applications in the area of accounting, customer relation management or shared calendaring are not available or need major improvements. Secondly, many mature F/OSS applications, which are already used in offices, such as file sharing, forum, web mail, or web logs, usually have different user management schemes, which enforce the user to remember different user names and passwords. By splitting the application across three tiers, we are able to separate out the three logical components of the system: user interface, computational logic and data storage. Each logical unit can then be developed separately from the others, introducing an important degree of flexibility into the design of the application. The open source-based set of tools provides a mechanism for tight integration of authentication schemes of various enterprise related applications to a commonly managed user base. The experience in ISP hosting business shows, that it is not wise, to give any user his/her own account to access different kind of services due to security risks. Instead, the product manages user accounts in a database and makes it available through various interfaces (including LDAP) and programming languages. This provides high flexibility for user (and group) management and minimizes the risk for exploits. The system provides enterprises with reliable business applications, which seamlessly work together, and makes any office independent from closed source software. The long-term impact of Open Source business applications is that it radically simplifies and standardizes servers in any companies big, medium or small data center. Because Linux runs as well on low-cost Intel as it does on high-reliability mainframes, Linux brings consistency and manageable to the data center. This makes Linux a key technology that will transform today's garbled, underutilized data center into a highly automated resource built on cheap hardware components, an architecture named "Organic IT." Unlike today's data center, in which it can take months to deploy an application, an Organic IT data center running Linux can deploy the same application in days. The system outlines a work programme and vision that leads to the development of:
- a framework platform for service deployment;
- an office server platform;
tools to help developers build services and applications to be deployed on this integrated platform. This is highly relevant to the strategic objective by producing open source components, by producing an integrated platform built using these components (to enable further innovation in the applications and services market), and by producing tools for designers to use to develop applications and services targeting this platform. A key feature of the platform is that is not simply an abstract middleware platform but an instantiation of such a platform in a real-world domain where there is a great demand for new innovative services (essentially hybrid Internet and office services potentially sharing resources from these two domains). At the heart of the system vision in this area is the use of IETF and W3C standards. The system sees this as being of relevance to all future business related services, especially those targeted at networking capabilities.

PHP web applications commonly make use of some objects to perform tasks such as connecting to databases or sending email. When moving websites between web servers, it is critical to know which objects are used on the site, as it may be necessary to install these objects on the new web server or to rewrite the code. The system looks for the instantiation of such an objects through the use of the CreateObject and Server.CreateObject functions. The report produced by the system contains a list of the objects used.

3. Conclusions
Implementation of this system in Romanian firms has the following advantages: obtaining a high efficiency and time saving, limited efforts for developing a new application in a short period of time and high performance of the system in solving the demands of e-commerce applications. The system uses secure socket connections (SSL) to transmit all sensitive information during confidential process. The application has been tested in an integrated system, with several servers running Windows 2000, connected in a network. The system was configured easily, and it has worked very fast because the communication protocol transmits just the information needed.

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