Oracle-ATG Commerce: A Case Study on Emerging E-Commerce Technologies

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ABSTRACT

In the present era of fast moving lifestyle, every human being is looking for each and every thing to be done within from his living place and at the ease of just a click from the computer. E-Commerce is one of the solutions for the shopping trends of a human making it online. Online shopping is becoming more popular as retailers are going on the web with their range of products made available in the internet. The E-Commerce is providing options for various methods of payment and shipping as well which is making the shopping hassle free and smooth.

There are list of products to fulfill the basic features of online shopping (E-Commerce) available by various organizations either with licensed versions or freeware. Here are few popular products available in the current IT market.
IBM Web Commerce Server
Oracle-ATG Commerce Server
Hybris Commerce Suite, etc.

Case Study: Oracle ATG Commerce
ATG now owned by Oracle Corporation is a robust Java based framework that offers solution and a perfect suite for any kind of online commerce business with all the basic features and flexibility of customization based on business need. As based on Java, it is becoming popular among the IT organizations and software developers.

Key Words
ATG- Art Technology Group

INTRODUCTION

The basic need that any e-commerce suite aims to fulfill is online shopping. Online shopping may involve between a business and a customer (B2C Commerce) or between a business and a business (B2B Commerce).

B2C Commerce	B2B Commerce
Selling to individuals	Selling to departments or whole companies
Promotions primarily based on individual activity	Promotions can be based on corporate activity
Typically, single or regional catalog	Catalogs often specialized for each partner company/ customer
Few order restrictions	Orders may be restricted based on customer's role/purchasing power/approval chain
Typically credit card and gift certificate payments	Payments are usually done via purchase orders and invoicing
One-time orders	Orders may need to be recurring/scheduled

Basic E-Commerce Features –
Below are the most common features for any online shopping store in their websites.

      Customer Experience (Customer Profile)

      Product Catalogue Display

      Sales Promotions

      Offers and Discounts

      Shopping Cart and Checkout

      Order confirmation with billing and shipping details

      Order fulfillment, etc.

ATG Commerce server is one of the e-commerce suites that offers all these features and can be used to design a full-fledged commerce website.

ATG in Brief

ATG, now owned by Oracle Corporation, is one of the most popular organizations providing solutions to online commerce requirements. As based on Java, it is becoming popular among the IT organizations and software developers. It provides flexibility to customize the commerce suite according to the requirements of the business.

History -
- ATG was founded in the year 1991 with providing solutions for building web sites.
- Year 2000 onwards it started focusing on commerce applications and business tools.
- In the year 2011 Oracle corporation acquired ATG.

ATG COMMERCE - A PERFECT COMMERCE SUITE

The ATG commerce framework is based on the ATG Dynamo Framework in originally built on Java technology and utilizes all the basic concepts of Java. With commerce ATG provides few other suites to build a perfect commerce website. The other modules include:

- ATG Merchandising (For commerce assets management)
- ATG Customer Service (For customer helpdesk and on-call shopping)
- ATG Search (For various search functionality in the site)

The ATG commerce architecture -
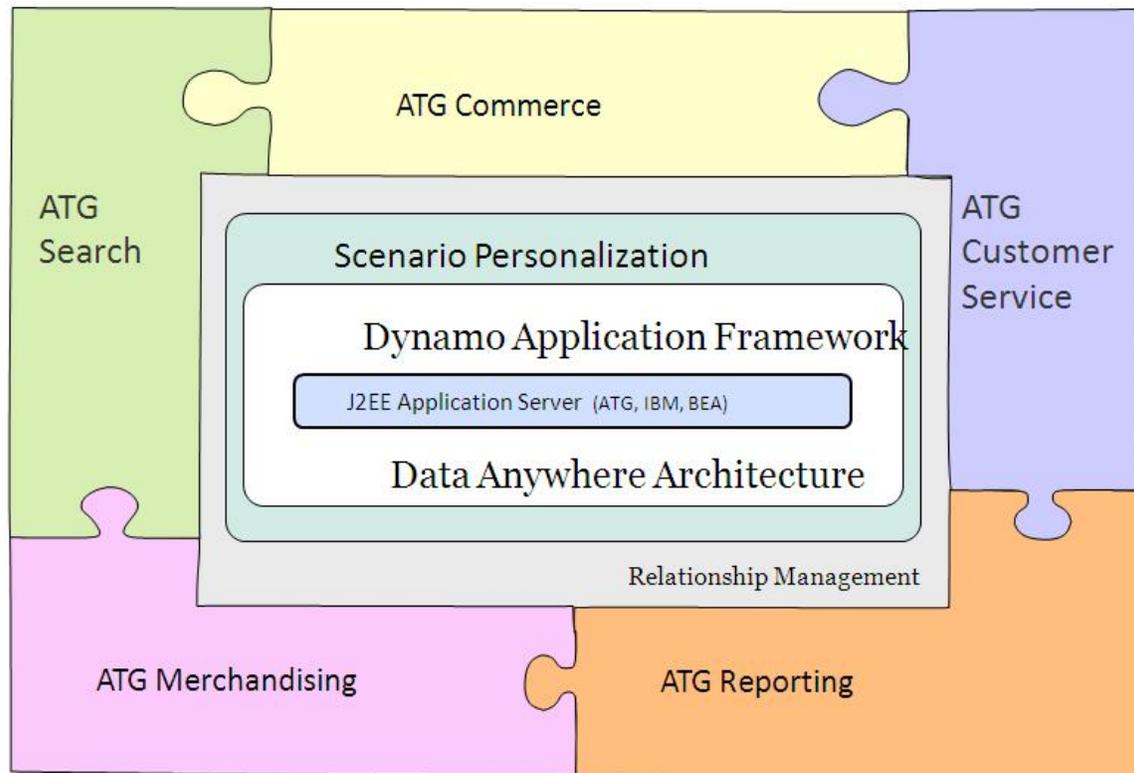
ATG COMMERCE IN FULFILLING THE BASIC E-CCOMMERCE NEEDS

1. Customer Experience:

Every website needs to attract the user/customer towards them in order to increase their business. ATG provides the Personalization module to manage the user and personalize the site with user preferences. It aims at targeting the user activities, preferences, etc and providing promotional contents to the user. Also basic features like user registration, login/logout are provided out of the box. The various techniques used by ATG to provide personalized contents on the web site are Scenarios, Targeters, etc.

Login   Register

User profile details -

Your Saved Addresses

Jatin Nayak
303 A, MLA
Colony Road No
12 Banjara Hills
Hyderabad - 500034
Andhra Pradesh
Ph: 9160499325

Delete address

2. Product Catalogue Display:
     Every commerce web site should have a perfect browseable product catalogue. ATG commerce provides a well organized catalogue structure with facility to maintain the categories, products and SKU (Stock Keeping Unit) in proper hierarchy.
     Also ATG provides two different catalogue facilities: Standard Catalogue and Custom Catalogue. Standard catalogue is for a simple online store for a particular locale/country with a single price structure. Custom catalogue is for a store having multi locale/country service with multiple price structure for different localities.

Catalogue

With this ATG catalogue also can contain additional info about the catalogue items like product descriptions, product images, etc. Apart from this it has flexibility of customizing the catalogue structure as per business requirement.

3. Sales Promotions:
All online stores need sales promotion to increase their business. ATG provides a simple way of promoting the sales with various features like up-selling and cross selling.
Up-selling: A store can display related products with a product display; e.g. in a cycle store we can display helmets, gloves displayed on the product page for the cycle. This will make the additional item to be noticed by the customer and he can go with purchase of these items as well.
Cross selling: We can have a comparison for products of different brands and displaying similar products of different brand in a product display page.

4. Offers and Discounts:
Providing offers and discounts to customers is another way of increasing sales and business. ATG provides various ways of displaying offers and discounts in the online store. Few examples are global discounts/offers, personalized discounts/offers.
ATG uses techniques like scenarios and slots to display global offers/discounts on a store. E.g. seasonal offers on a cloth store which can be provided by means of a scenario server with certain time/date with specific region rule.

For personalized offers ATG uses targeter concept to target particulat users/customers with displaying the offers according to the user interests.

5. Shopping Cart and Checkout:
Shopping cart is the virtual cart that contains the products that a customer is buying online. It displays the details of all the products that are added to the cart by the users with the description and price details. And on completion of shopping the customer should be able to checkout with all the products after paying the bill online.
ATG provides all the technical components that display the shopping cart on the page. Also it provides flexibility of modifying the cart contents on the fly.
ATG provides two different checkout processes: Standard checkout, Express checkout.
Standard checkout process is for normal user where user has to provide all the details of billing, shipping and payment details and confirm the order.
Express checkout is for registered customers who have already provided their details (billing, shipping, payment) to the website and during checkout their saved information are used for the checkout process. It is hassle free but involves risk from customer's point of view, as his details are being stored at the website data base.
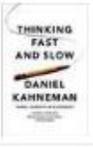
6. Order confirmation:

The next step after customer places order is to confirm the order with authorizing the order price amount from the card details provided by the user. This can be done with help of a 3rd party vendor who provides the payment gateway services.

ATG provides flexibility of integration with most of the 3rd party payment gateways for order confirmations. Various 3rd party vendors that can be integrated with ATG suite are Cybersource,

DataCash, PayPal, Verisign, etc.

7. Order fulfillment:
The final process for the online shopping is the order fulfillment. In the process the order items are shipped to the customer from the warehouse, inventory level is updated and the order status is updated accordingly in the order database at the database.

ATG provides the 'Fulfillment' module, a full-fledged module for all the processes involved in a standard order fulfillment. It takes care of the order on the post order confirmation phase. The basic steps in this phase are:
- Updating order status according to the ware house and payment provider responses
- Keeping the customer and the vendor updated about the status
- Sending emails and acknowledgements to customer and the vendor
- Updating the final status after the order is shipped to the customer successfully

A sample environment for a complete commerce website on ATG Commerce

For building up an online commerce store on ATG framework below are the list of required environment assets we need.

Commerce Suite: ATG Commerce Server
Language: Java
Application server: Jboss, WebLogic, WebSphere
Web Server: Apache web server (or any other web server)
Operating System: Linux, Windows, Mac
Database: Oracle, MySql, Sql Server

Advantages and Technical Support

Oracle-ATG provides global support for all kind of technical assistance. Also, wide range of technical forums and blogs available on the internet. So developers can get assistance. Also Oracce-ATG provides 24-7 support helpdesk for any technical issues with the product.

Oracle-ATG's own discussion forum:
https://forums.oracle.com/forums/category.jspa?categoryID=503

Other forums:
http://groups.google.com/group/atg_tech
http://atgtech.blog.com/
http://www.atgknowledgebase.com/tiki-index.php

Limitation and Future Enhancements

Though ATG commerce is a robust platform for an e-commerce application, but it's only limitation is it's licenses are of high cost

Future scope of enhancement:
Currently ATG is widely used in the USA and European countries. Still it has to cover the Asian market. Also it has to add new commerce features according to the day by day increasing demand of the various business and customer needs.

Sites running on ATG

Below are few of the online stores of various retailers those run on ATG Commerce:
www.epson.com
www.burberry.com
www.target.com
www.walmart.com
www.moltonbrown.com, and many more.

In India the only online retail store running on ATG is Future bazaar (Future Group).
www.futurebazaar.com

Currently few online stores are making e-commerce popular in Indian market. Few of them are:
www.flipkart.com
www.ebay.com
www.yebhi.com
www.olx.com
www.naaptol.com

CONCLUSION

Now a day's e-commerce is becoming popular because of its easiness and hassle free nature of shopping and door step customer service. Though unlike developed USA and European countries in India most of the population are still to get familiar with internet and online shopping, but we can see a vast and open opportunity for e-commerce in the near future. We can say India and other Asian countries are the perfect field for e-commerce to grow and flourish. In very near future we can see a different Indian Retail Market doing its business online with the power of e-commerce. And we can see e-commerce service providers like Oracle-ATG and others making their products more powerful to fulfill all sort of online business requirements.

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