Magento - an introduction and integration with TYPO3

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Agenda

1. Introduction of Magento
2. The integration scenario
3. The integration solution
4. An evaluation of the solution
What is Magento?

- Open Source E-Commerce system
  - produced by American e-commerce specialist Varien Inc.
  - final version 1.0 published March 31st, 2008
  - current version 1.1.6 with additional functionality
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• broad positive response
  • Zend Enterprise PHP Management News
  • Jack Aboutboul, Red Hat
  • ecommerce-guide.com
What is Magento?

• Some of Magento’s out-of-the-box functionalities
  • five different types of products: simple, configurable, virtual, grouped & bundle products
  • good marketing functionality
    • up-/cross-selling
    • newsletter-generation
    • huge pricing possibilities
  • good analytics and reporting functionalities
  • search engine-optimized
  • internationalization support
  • multi-shop functionality
Magento’s pros

- high functionality
- modern architecture
- high flexibility, extensibility, maintainability
- well-defined interfaces
- highly scalable
Magento’s cons

• high complexity
• inadequate documentation
• high requirements on server hardware
• still some minor bugs or missing functionalities
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The scenario

- existing TYPO3 website
  - has login functionality for website users
  - users already registered
The scenario

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  - users already registered

- customer wants to integrate e-commerce shop into existing site
  - mini cart on regular pages
  - product teasers in infoboxes
  - whole workflow integrated
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Live Presentation
The integration

- **Magento offers a Web Services API**
  - interfaces for catalogue, customer and order data
  - perfect to integrate Magento with ERP or CRM systems
- **some drawbacks:**
  - no possibility to add new orders
  - menus and other elements would have to be synchronized between systems
  - performance & security issues
  - different templating systems - doubled templating efforts
The integration

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- Magento API no real option
Our solution - the frontend

- TYPO3 starts Magento via PHP in FE plugin
  - Magento offers two modes
    - run-mode executes full application and renders everything
    - app-mode only initiates framework ➔ good basis for an integration
  - TYPO3 passes configuration information to control the application
  - switched some major classes of Magento
    - aim: adapt dispatch process to control the application flow
    - development principles:
      - change as few as possible
      - assure upgradability of Magento
      - Magento still runnable as stand-alone application
Our solution - the frontend

- some problems
  - gathering output
    - how to gather the wanted content?
    - solution: tell Layout-classes to remind their output instead of putting it out
  - link generation
    - how to generate TYPO3 style links in Magento?
    - solution: pass a cObject to Magento and let it render all the links
  - configure outputs
    - how to translate TYPO3 style piVars to Magento parameters?
    - solution: create a TYPO3 router that knows how to handle piVars arrays
Our solution - the frontend

• some problems
  • user synchronization
    • how to make both systems use the same users information?
    • solution: implement a Magento user model that executes database changes in TYPO3
  • session synchronization
    • how to implement a single sign on for both systems?
    • solution: implement observer objects for logging in and logging out
  • AJAX calls
    • how to keep Magento’s AJAX calls working?
    • solution: avoid TYPO3 outputs when requests bases on JSON instead of HTML
Our solution - additional functionality

- menu generation
  - possibility to integrate Magento menus into TYPO3 menus
  - based on HMENU with user function
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- TYPO3 backend integration
  - best possible interface for editors
    - bases on TYPO3 flexforms
    - reads categories & products from Magento API
  - additionally possibilities to insert plugins via TypoScript
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4. An evaluation of the solution
Our solution - evaluation

- solution to the given scenario
  - integrated whole workflow
  - integrated desired contents
  - synchronized users and sessions
Our solution - evaluation

• solution to the given scenario
  • integrated whole workflow
  • integrated desired contents
  • synchronized users and sessions

• still problems ahead
  • need some work to implement backend interfaces for all desired views
  • solution for Magento-side caching of content links
  • more configuration possibilities in Magento Backend
Thanks for your attention

Please don’t hesitate to ask questions!