

**OpenCms**



# An introduction to OpenCms, version 4.6

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# Agenda

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- Overview
- Hard & Software requirements
- Basic System demonstration
- Development basics
- Advanced System demonstration
- Roadmap
- Reference Projects



# OpenCms overview

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- OpenCms is a Website Content Management System
- OpenCms is Open Source Software and published under the LGPL license
- OpenCms can be freely downloaded from the project's website: <http://www.opencms.org>
- The software is written in 100% Java
- The OpenCms development effort is coordinated by the OpenCms group and sponsored by companies
- First released as Open Source in March 2000
- Version 4.6 released February 2002

# OpenCms 4.6 features

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- Browser based editing
- Integrated user management
- Project based working
- Version control of content
- History of changes
- Dynamic page rendering
- Static export with “backlink” capability
- Fully database driven
- Page & element caching mechanism
- Workflow & task management
- Open module API for extensions



# Soft- & Hardware requirements

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- **Software:** Open Source to „High End“
  - e.g. Linux + Tomcat + mySQL
  - e.g. Win NT + IIS + Tomcat + MS SQL
  - e.g. Solaris + BEA + Oracle
- **Hardware:** High flexibility
  - Runs on a notebook computer
  - Standard configuration:  
Normal Intel PC, 1Ghz CPU, 512 MB Ram
  - Other:  
SUN Sparc or HP Unix Hardware  
Clusters, Load – Balancers ...



# Basic System Demonstration



# Demo Screenshot 1: The Explorer - View



OpenCms Workplace of a.kandziar@opencms.framfab.de - Microsoft Internet Explorer

Project: Online View: Explorer

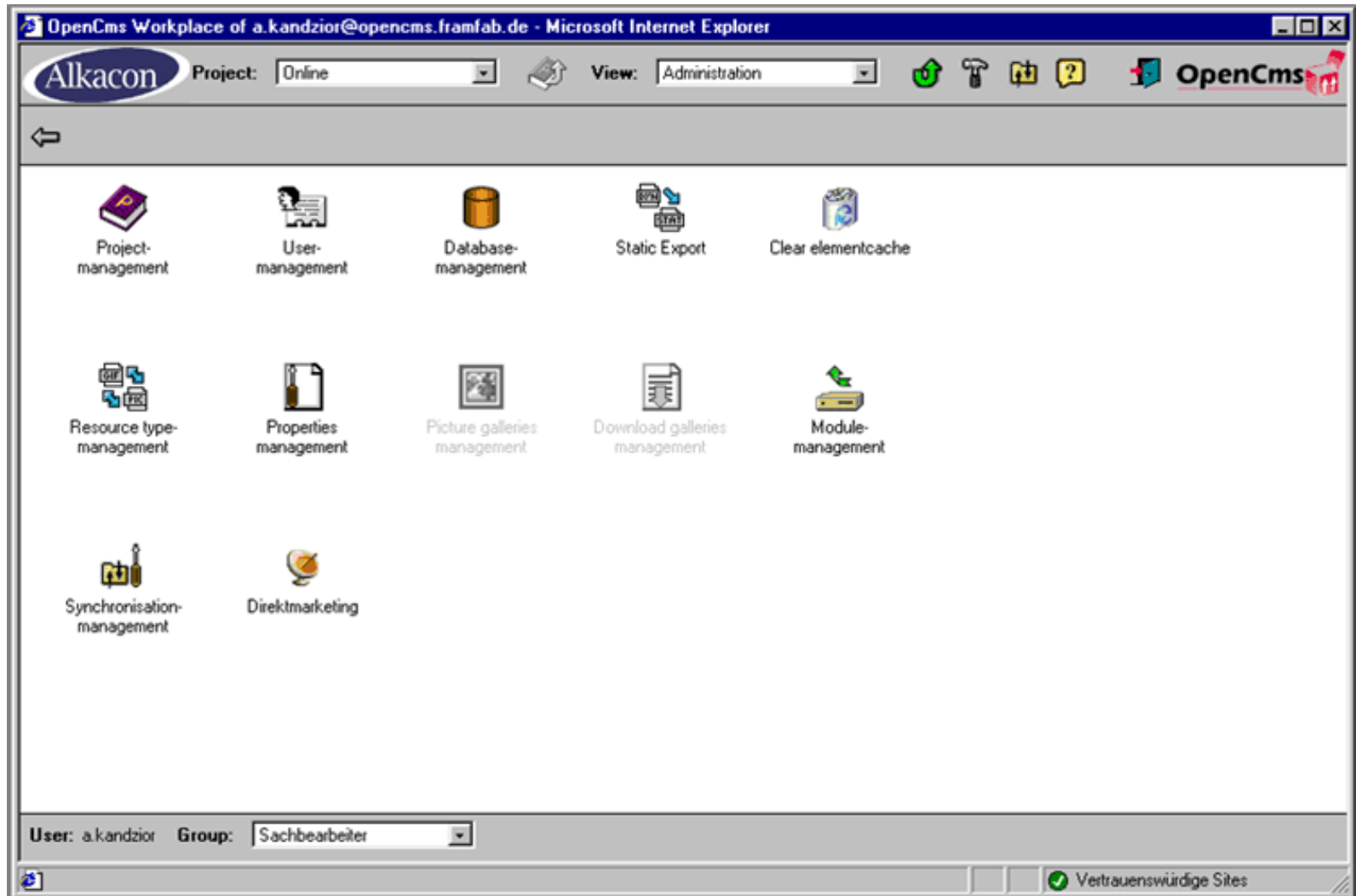
Location: /

Name	Title	Type	Date Changed	Size	State
content		folder	29.08.2001 18:21		unchanged
download		folder	29.08.2001 18:21		unchanged
extranet	passwortgeschuetzter Bereich	folder	29.08.2001 18:21		unchanged
moduledemos		folder	06.09.2001 08:33		unchanged
pics		folder	29.08.2001 18:21		unchanged
public	oeffentlicher Bereich	folder	29.08.2001 18:21		unchanged
system		folder	06.09.2001 08:33		unchanged
index.html	OpenCmsMicrosite	page	24.09.2001 12:57	406	unchanged
opencms.css	Stylesheet	plain	03.09.2001 10:11	655	unchanged

User: a.kandziar Group: Sachbearbeiter

Fertig Vertrauenswuerdige Sites

# Demo Screenshot 2: The Administration - View



The screenshot shows the OpenCms Administration interface within a Microsoft Internet Explorer browser window. The address bar displays "OpenCms Workplace of a.kandziar@opencms.framfab.de". The page header includes the Alkacon logo, a "Project: Online" dropdown menu, a "View: Administration" dropdown menu, and several utility icons (refresh, home, help, etc.). The main content area is a grid of administrative functions, each with an icon and a label:

- Project-management
- User-management
- Database-management
- Static Export
- Clear elementcache
- Resource type-management
- Properties management
- Picture galleries management
- Download galleries management
- Module-management
- Synchronisation-management
- Direktmarketing

At the bottom of the interface, the "User: a.kandziar" and "Group: Sachbearbeiter" are displayed. The browser's status bar at the very bottom shows a green checkmark and the text "Vertrauenswürdige Sites".





# Demo Screenshot 3: The Tasks - View



OpenCms Workplace of a.kandzior@opencms.framfab.de - Microsoft Internet Explorer

Alkacon Project:  View:

Filter:   For all Projects

Task	For User	For Group	Task Initiator	Date due	Date created	Project
<input type="checkbox"/> Edit page index.html	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input checked="" type="checkbox"/> Check new images	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input type="checkbox"/> Publish extranet - folder	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input type="checkbox"/> Add new User to Projectmanager group	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input checked="" type="checkbox"/> Check Syntax of Masteremplate	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online

- Query
- Forward

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- Date Due
- Priority
- New Comment
- Complete

User: a.kandzior Group:

javascript.doTAction(DO\_TOK) Vertrauenswürdige Sites

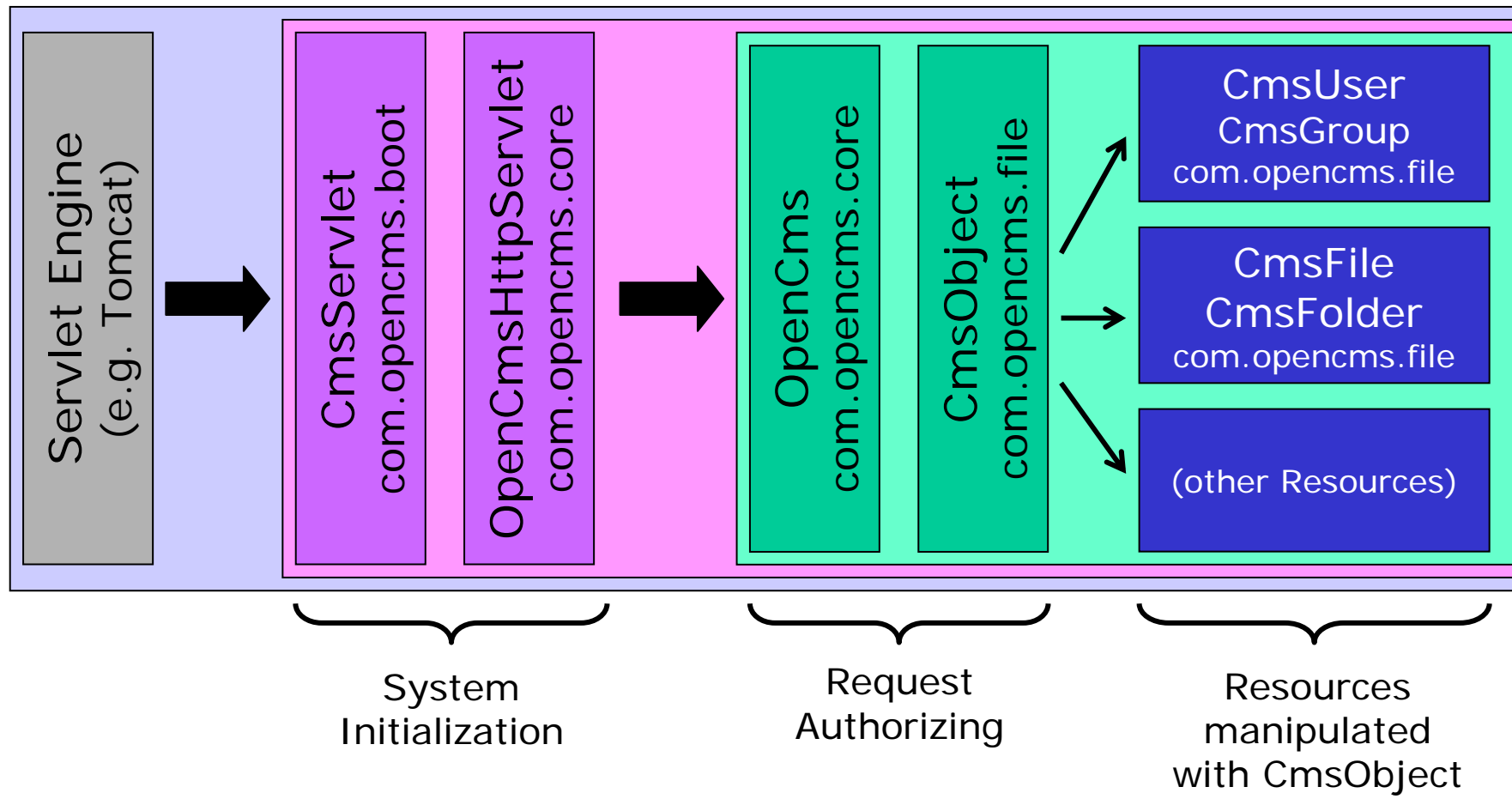
# OpenCms Development

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- Development in OpenCms requires knowledge in
  - HTML
  - Basic XML
  - SQL (JDBC)
  - OpenCms XML Template API
  - OpenCms Java API
- Development in general is separated in “Core” and “Module” development
- Development on a project is usually “Module” development. These modules are managed with the workplace.




# Core class architecture



# Page access & delivery

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URL: `http://server.name.com/opencms/opencms/somdir/somepage.html`



Server ID                      Servlet context  
(required by Tomcat)                      Handled to the servlet  
as a parameter

1. CmsObject will be created with requesting users permission (or "Guest" if not identified)
2. CmsObject will try to access the requested resource (i.e. /somedir/somepage.html)
3. If sufficient permissions are available, resource will be processed according to the resource type
4. Output of the process is delivered back to user

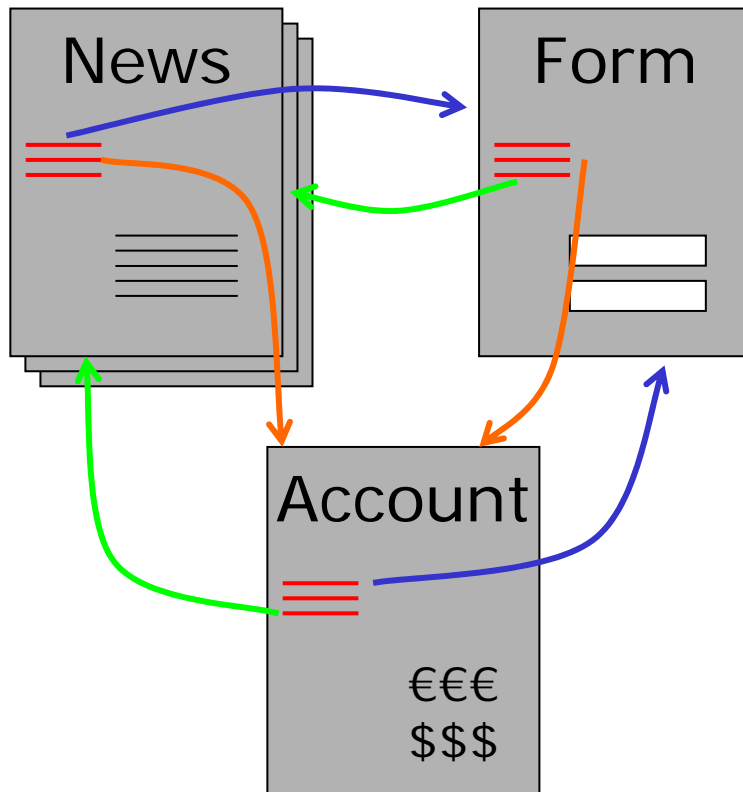
# OpenCms Template mechanism

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- The most common requested resource type is "page"
- Pages are constructed from several elements and sub-elements
- OpenCms uses a template mechanism based on XML (Xerces parser) to build the pages from the elements
- Dynamic functionality is created by writing Java classes that extend `com.opencms.template.CmsXmlTemplate`
- The Template mechanism features sophisticated caching and static export of pages



# Static Export & "Backlink"



- Pages in "News" contain only static information
- Page "Form" is part of a dynamic application
- Page "Account" is dynamic and requires https security
- All 3 Pages should be based on the same templates
- **OpenCms 4.6:** Manages all 3 Servers with different URLs on one set of templates, automatically insuring consistent Links

# Advanced System Demonstration



# Demo Screenshot 4: The Mastermodule Backoffice



OpenCms Arbeitsplatz von Admin@3m-pressnet.framfab.de - Microsoft Internet Explorer

Alkacon Projekt:  Ansicht:

Filter:  Filterparameter:

Titel	Projekt	Veröffentlichungs-Monat	Start-Datum	End-Datum	geändert durch	Status	Rechte
3M Dual Lock flexibler Druckverschluss SJ 4570	Test	Oktober 2001	01.10.2001 00:00	01.10.2003 00:00	sterie	unverändert	rwwww-v
<b>3M VHB 5970 doppelseitiges Klebeband</b>	Test	Oktober 2001	01.10.2001 00:00	01.10.2003 00:00	Admin	geändert	rwwww-v
<b>3M-07699-Transparente-Abdeckfolie</b>	Test	Oktober 2001	01.10.2001 00:00	01.10.2003 00:00	sterie	gelöscht	rwwww-v
3M Fastbond 100 Kontakt-Dispersionklebstoff	Test	Mai 2001	01.05.2001 00:00	01.05.2003 00:00	sterie	unverändert	rwwww-v
3M Fastbond 49 Dispersionklebstoff	Test	Mai 2001	01.05.2001 00:00	01.05.2003 00:00	sterie	unverändert	rwwww-v
Neue hydraulik- und bremsflüssigkeitsbeständige 3M Kennzeichnungsfolie 7870	Test	Februar 2001	01.02.2001 00:00	01.02.2003 00:00	sterie	unverändert	rwwww-v
3M erweitert das Produktangebot im Bereich thermisch leitender Klebebander	Test	November 2000	01.11.2000 00:00	01.11.2002 00:00	sterie	unverändert	rwwww-v
3M elektrisch leitende Klebstoff-Filme	Test	November 2000	01.11.2000 00:00	01.11.2002 00:00	sterie	unverändert	rwwww-v
<b>Klebstoff-Filme</b>	Test	November 2000	01.11.2000 00:00	01.11.2002 00:00	Admin	neu	rwwww-v

- Bearbeiten
- Löschen
- Kopieren
- Eigentümer ändern
- Gruppe ändern
- Zugriff ändern
- Freigeben
- Direkt veröffentlichen
- Historie

Benutzer: Admin Gruppe:

Internet



# Roadmap

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- OpenCms Version 4.6 is the current major release
  - Master module
  - Static export with “backlink” and https
  - Tons of “issues solved” ;-)
- No target date for the next release is set so far
- Possible features for future releases, currently in discussion
  - Support for JSP
  - Velocity template engine
  - Lucene search engine
  - Internal link management
  - Advanced multisite configuration



# Some reference projects

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- BP South Africa  
<http://www.bp.co.za>
- UNICEF Netherlands  
<http://www.unicef.nl>
- HKL Baumaschinen (Industry)  
<http://www.hkl-baumaschinen.de>
- DEURAG Rechtsschutz – Versicherung (Insurance)  
<http://www.oevp.at>
- ÖVP Oberösterreich (Political Party)  
<http://www.oevp.at>
- University of Würzburg  
<http://www.wirtschaftsinformatik.net>
- Catholic Church of Cologne  
<http://www.erzbistum-koeln.de>
- Gemadi (Multimedia Agency)  
<http://www.gemadi.de>
- Darik Radio (Bulgarian radio station)  
<http://www.darik.net>
- Secartis (IT security firm)  
<http://www.secartis.de>
- ...

# Contact information:

<http://www.opencms.org>

<http://www.alkacon.com>

[info@alkacon.com](mailto:info@alkacon.com)

