

Keep the savings, increase functionality

























I WANT TO TALK ABOUT

Part 1: Short Introduction

Part 2: Changes & Enhancements

Part 3: Challenges

Part 4: Measures

Part 5: Conclusion



SHORT INTRODUCTION

The system we are talking about ...



SHORT INTRODUCTION

Our move to OpenCms

- Coming from a grown Fatwire Content Server 5.5, Websphere, Oracle 9 environment we were faced with high costs, poor flexibility and maintainability in 2006.
- 2006/2007 we have moved towards an Open Source Plattform with OpenCms as core application saving a remarkable amount of money.

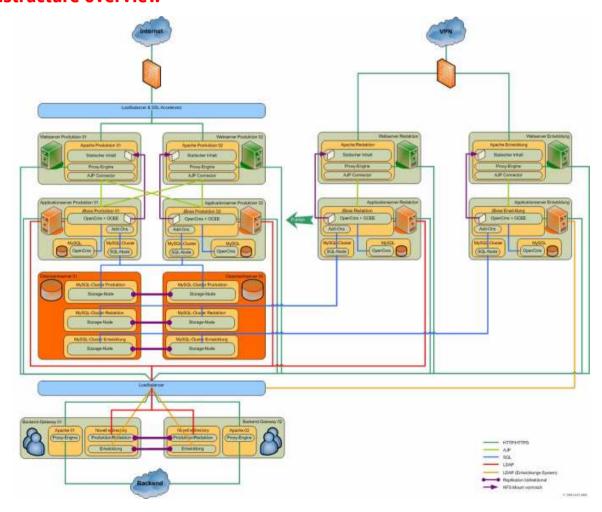
Key features

- flexible and expandable functional and technical architecture based on OpenCms
- 30+ sites, 300 workplace users, three styles supported with templates
- 15.000 70.000 elements per site (pages, folders, xmls, pictures)
- 40.000 to 300.000 page impressions per month / per site
- support of different channels for content delivery (own site, insurance agencies sites, saving & loan bank sites)
- application integration in OpenCms pages
- Create and maintain hundreds of online forms with so called form generator
- multiple usage of content in different sites (content sharing)



—— SHORT INTRODUCTION

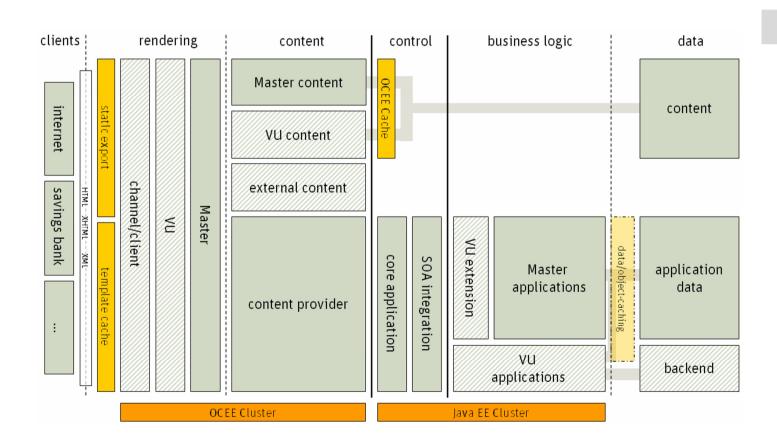
Infrastructure overview





SHORT INTRODUCTION

Application architecture





— SHORT INTRODUCTION















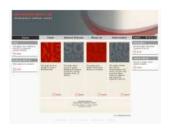


















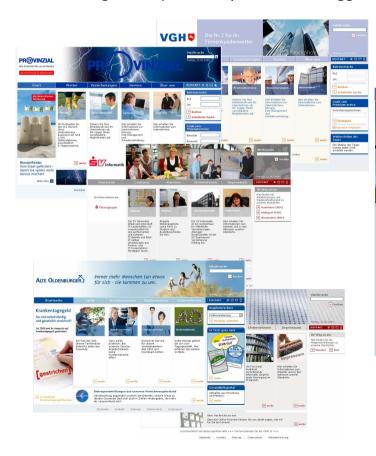


What happened since then ...



More sites, additional style

- Expanding number of sites from 30 to 60.
- Adding new style & template set for biggest site.

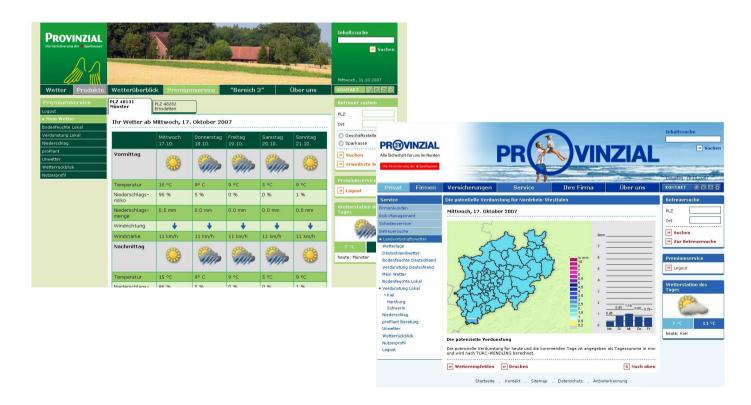






Providing special weather information for registered users

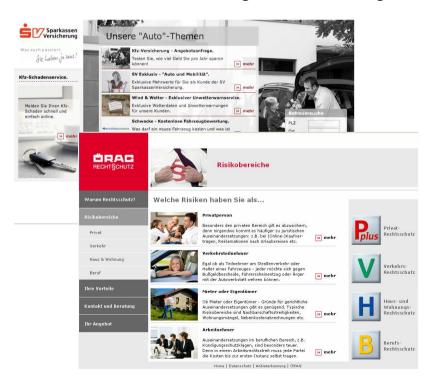
- Registered users get access to special weather informations e.g. rainfall, soil humidity usefull for farmers.
- Application takes raw data and builds maps, graphics etc. based on user preferencies.





Microsite Feature

- Users can create microsites for special target groups or campaigns with a set of templates.
- Microsites can appear in a layer, a new browser window or as stand alone site.
- Users can change the style of the microsite by changing the css-files.
- Second rendering channel provides a flash version of the microsite while supporting nonflash-browsers, search engines, bookmarking







Integrating news agency content

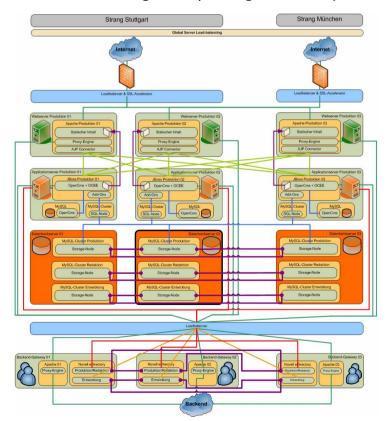
- New regional portal functionality for customer retention integrating news agency content delivered as xml and combining it with regional sport news.
- Providing separate and simple workplace access towards newspaper editor.





Improving availability

- Having two productions nodes in one data centre working as a cluster was fine.
- Now we have added a third production node in a distant data centre for desaster recovery.
- Implementing global load balancing for improving availability.



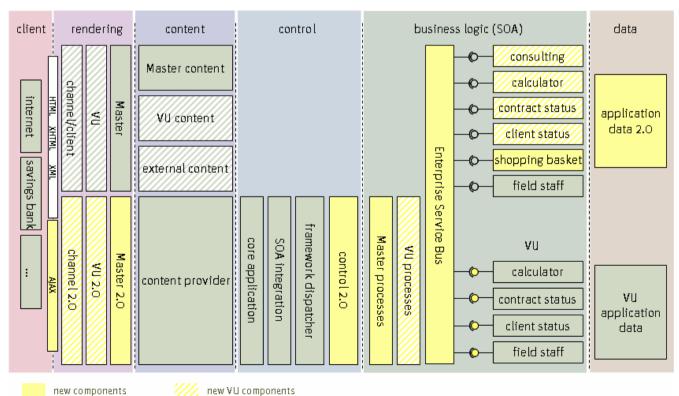


existing VU components

Service- and process integration

existing components

- Moving from shop window to integrated service plattform demanded enhancements in the application architecture.
- In the future most of the sites will cooperate with other applications and insurance backend processes.





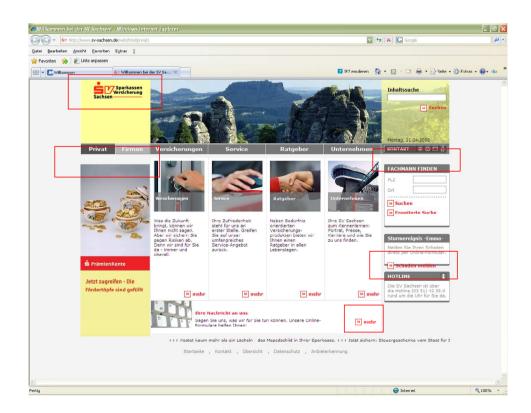
Live isn't easy going ...



New browsers

- Whole system was build for MSIE 6/7, Firefox 1.x as target browsers.
- Since then new browsers appeared with interesting behavior.







New content & navigation concepts

- Increasing use of layers for further information etc. leads to new questions.
- While creating content and rendering is quite easy, it is much harder to answer questions regarding SEO, full-text search and bookmarking.

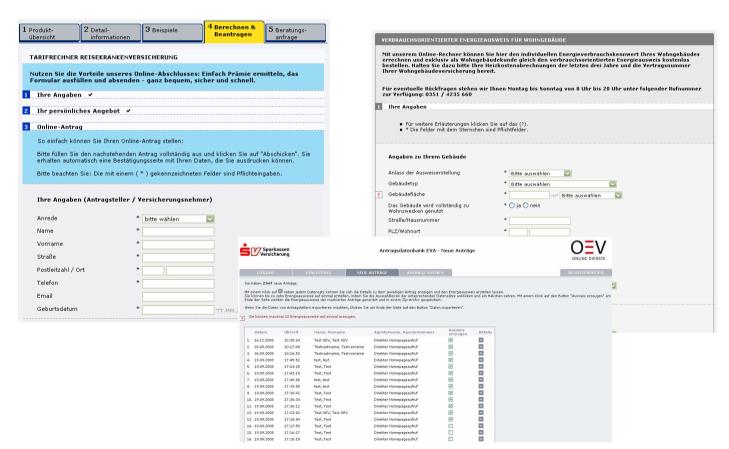






Increasing number of applications & security questions

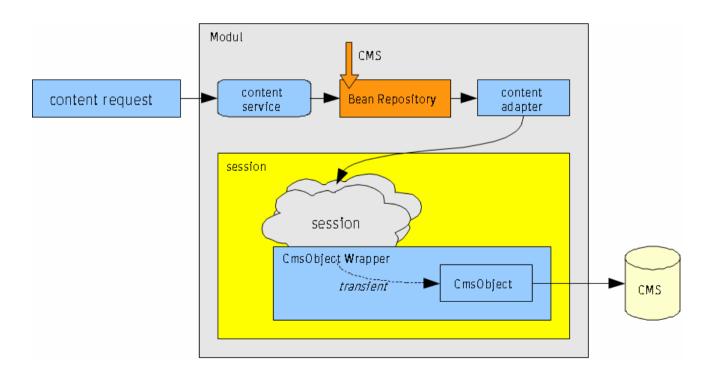
- More applications allow more service. And most application collecting data with fields.
- And any field can be vulnerable for cross site scripting, sql injection and other fine things.





Use of AJAX

- AJAX allows cool behavior, interesting service etc..
- Unfortunatly AJAX requests do not have reference to the single site in a multi-site system.
- Session can't hold anything due to cluster performance.
- AJAX requests have to work in the offline projects to.





Combining content with application

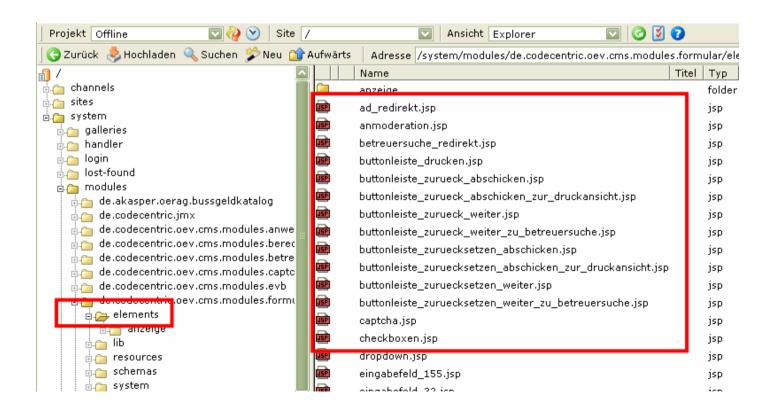
- Combining content with application logic and data changes the way of creating content by users.
- Used to work with wysiwyg and creating "just" content users now have to add IDs etc..





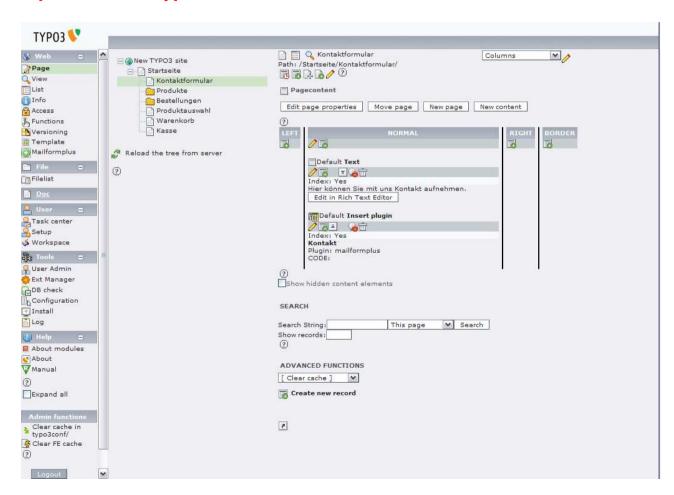
No one likes JSPs

- We do have programmed many JSPs, XMLs etc..
- But have You ever met a client in sales or marketing interested in that?





Competition from Typo3 & Co.





Other nice topics to think about

- Building a complex system needs staff training during the project and afterwards.
- Infrastructure has to be reviewed and renewed after several years.
- We are still working with something like OpenCms 6.5 or 7 beta.
- Sometimes expectations are higher than even the most powerful content management system can fulfill.
- Growth of content data base can't be addressed by buying a 500 GB mobile hard disk at a cheap online store.

and

 Reducing costs with the project was fine with our clients. But 2010 the provider contract ends. And expecations for further reduction are fundamental.

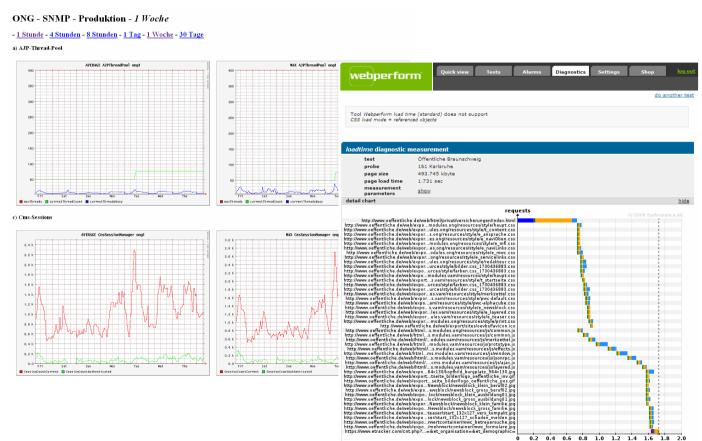


How do we face the challenges ...



Application monitoring

- We do collect application behavior data with JMX and convert JMX-messages in SNMP.
- We use webperform.com for a permanent external view on our sites.





Change Control & Staging

OEV Next Generation Master

- Starting even with our development environment we document every new version or application for all stages.
- No new application should be installed without reference to bug or change request in the ticket system.
- Staging has to follow our deployment process rules.

| Hinzugefügt von <u>Robert Spielmann,</u> zuletzt bearbeitet von <u>Markus Ams</u> Stichwörter: <mark>BEARBEITEN</mark> Stand Versionen Module in OpenCms | | | | | | | |
|--|---------|---------|---------|--|--|--|--|
| | | | | | | | |
| Persistenz | 1.7.9.2 | 1.7.9.2 | 1.7.9.2 | | | | |
| Kern | 2.0.5 | 2.0.4 | 2.0.4 | | | | |
| Stylemodule | DEV | INT | RED | | | | |
| ONG | 2.0.13 | 2.0.13 | 2.0.13 | | | | |
| VKB | 2.0.15 | 2.0.14 | 2.0.14 | | | | |
| Master | 2.0.1 | 2.0.0 | 2.0.0 | | | | |
| Relaunch | 1.8.0 | 1.8.0 | 1.8.0 | | | | |
| Funktionsmodule | DEV | INT | RED | | | | |
| Berechtigung | 1.0.0 | 1.0.0 | 1.0.0 | | | | |
| Betreuersuche | 2.0.0 | 2.0.0 | 2.0.0 | | | | |
| Captcha | 1.0.4 | 1.0.3 | 1.0.3 | | | | |
| eVB | 1.1.4 | 1.1.4 | 1.1.4 | | | | |
| JMX | 1.0.4 | 1.0.4 | 1.0.4 | | | | |
| Kern Integration | 2.0.2 | 2.0.2 | 2.0.2 | | | | |
| Kern Integration Prototyp | 1.7.4 | 1.7.4 | 1.7.4 | | | | |
| Formulargenerator | 1.8.7 | 1.8.7 | 1.8.7 | | | | |
| Formularversand SVAG | 1.1.3 | 1.1.3 | 1.1.3 | | | | |

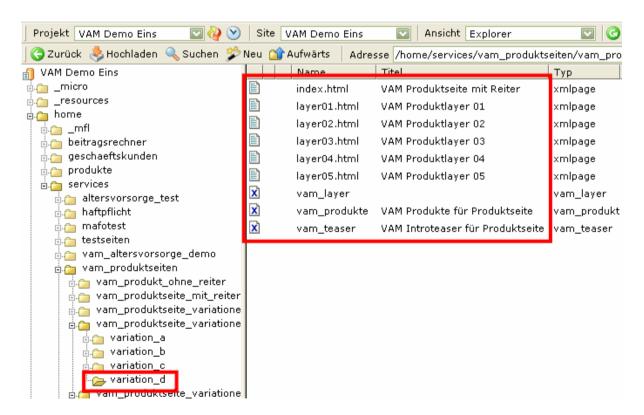
| Ticket | Bearbeiter | Modul | Bemerkung |
|--|--|--|--|
| CMX-411 | MAM | VKB | |
| CMX-400 | MAM | Pflegeportal | |
| VAM-242 | RSP | Pflegeportal | |
| CMX-380 | MAM | Master, SPM, VOEV | |
| CMX-381 | МАМ | VGH | |
| CMX-412 | MAM | Captcha | |
| CMX-406 | MAM | Microsites | |
| CMX-416 | TKN | Microsites | |
| VAM-242 | RSP | Kern | |
| deploy-20(deploy-20(deploy-20(| 090603-0945- 090603-1900- 090603-1000- 090603-1040- 090604-0945- | vkb2008-v02_00_15- pflegeportal-rc01_08 master-v02_00_01-c spm-rc01_00_03-cce voev-rc01_00_01-cce vgh-v02_00_02-cce.t | _08-cce.tar.g: ce.tar.gz .tar.gz e.tar.gz :ar.gz |
| deploy-200 | | cupa-u01 01 10-coa | |
| deploy-20(deploy-20(deploy-20(| 090603-1030-: 090603-1100-: | svag-v01_01_10-cce captcha-rc01_00_04- mic-v02 01 02-cce.t | cce.tar.gz |



MEASURES: SPLIT IT UP

Splitting up the pages

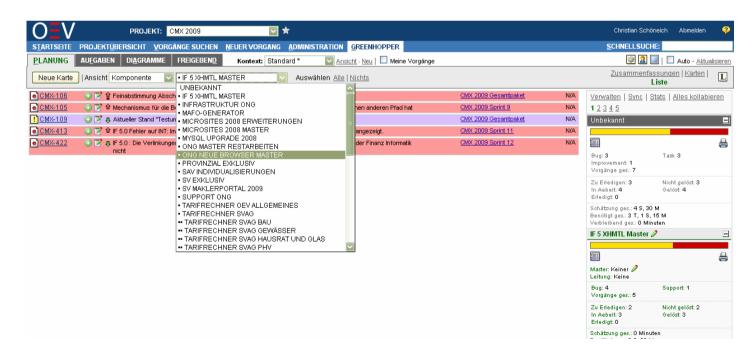
- We do split up more complex pages in several elements.
- Less experienced users can still change the content with simple forms or wysiwyg, while "professionals" can configure behavior, application integration etc.





Speeding up development

- Faced with a huge number of change requests from different projects and clients we merged all projects as components of one large project.
- All project managers or account managers participate in the bi-weekly sprint planning.
- Dependencies and synergies can be detected and addressed in common.





Document dependencies

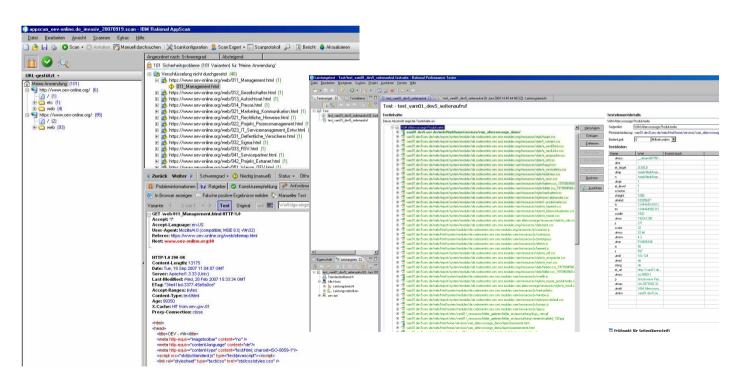
- Faced with many OpenCms modules, applications and configurations changed in different projects we needed an overview easy to understand by non-technical project members too.
- Simple MS Excel Sheet proved as sufficient.

| Funktion | Modul | dependencies | wars | configurations |
|---|--|--|---------------------------|--|
| SV-Exclusiv Login | oev-cms-svexclusiv-mod | oev-cms-kern-module oev-ong-persistenz | oev-svexclusiv.war, oev- | s oev-sv exclusiv-jndi-binding-service.xml |
| Funktionalität zum Signieren mit dem | S oev-cms-svexclusiv-mod | | oev-sv exclusiv.war, oev- | s oev-sv exclusiv-jndi-binding-service.xml |
| WPV Vertriebsschaltseite WPV Aussendienst Mehrwertcontaine | oev-cms-wpv-module r oev-cms-wpv-module | cov ong persistenz | | |
| VGH Erweiterung Formulargenerator | oev-cms-vgh-module | oev-cms-kern-module oev-cms-kern-integartion oev-ong-persistenz | -module | uf den Formuargenerator aufbaut |
| VGH Pensionskassenrechner | oev-cms-vgh-module | oev-cms-formular-module oev-cms-spm-module we oev-cms-kern-module we | | ilität |
| VGH Schaden-Workflow | oev-cms-vgh-module | oev-cms-formular-modulo oev-cms-kern-module oev-cms-kern-integartion oev-ong-persistenz | ŭ | ιι oev-jn di-binding-service. xml |
| ÖRAG Bausteine ÖRAG Premiumservice | oev-cms-oerag-module oev-cms-oerag-module | | addb.war, oevtroeragrs.v | v oev-jndi-binding-service.xml mit dem Pfa |
| SPM Email-Formular + Mail-Sender | oev-cms-spm-module | oev-cms-master-module | wegen der Oberflächen | oev-jndi-binding-service.xml |
| VOEV Email-Formular + Mail-Sender | oev-cms-v oev-module | oev-cms-master-module | wegen der Oberflächen | oev-jndi-binding-service.xml |



Permanent security & performance testing

- We do check performance with IBM Rational Performance Tester at regular intervals or at major changes.
- We do check application security with IBM AppScan at regular intervals or at major changes.





Regular checks of logfiles

- Even it there's no breakdown, performance problem etc. we do check logfiles.
- There will be always things like nonpractical logging configurations etc..
- Cleaning up logging configuration regularly makes logfiles easier to read then You need them.

1. ERROR-Einträge

Cmsinclude für "breadcrumpElement"

Log-Eintrag

2008-10-14 00:01:13,122 ERROR [de.codecentric.cev.cms.modules.kern.tags.CmsIncludeTag] Der Jsp Pfad für das zu inkludierende Element 'breadcrumbElement' kommte nicht über das Bean Repository ermittelt werden.

Anzahl Einträge Prod1: 3135 Prod2: 3350

Ursache

Die Integrations-JSPs (Anwendungsintegration, z.B. Betreuersuche) verweisen noch auf das Element "breadcrumpElement". Dieses existiert nicht (mehr) und daher dieser Log-Eintrag. Lösung: aus den Integrations-JSPs entfernen.

OpenCmsCore-Klasse

Log-Eintrag

Anzahl Einträge

Prod1: 865 Prod2: 897

2008-10-14 00:03:28,708 ERBOR [org. opencus main. OpenChasCore] oc OpenChasCore gerufen.
2008-10-14 00:03:28,705 ERBOR [org. opencus main. OpenChasCore] Message: Error reading resource
from path "/firmen/service/landmirtschaftswetter/mein wetter/mein wetter_detail/index.html".
2008-10-14 00:03:28,705 ERBOR [org. opencus main. OpenChasCore] Cause:
org. opencus.security. ChasPermissionViolationException: Demied access to resource
"/firmen/service/landmirtschaftswetter/mein_wetter/mein_wetter_detail/index.html", required
permissions are "t":
2008-10-14 00:03:28,705 ERBOR [STDERR] org. opencus.security. ChasPermissionViolationException:
Error reading resource from path
"/firmen/service/landmirtschaftswetter/mein_wetter/mein_wetter_detail/index.html".
2008-10-14 00:03:28,705 ERBOR [STDERR] at
0709.opencus.security. ChasPermissionViolationException.createException(ChasPermissionViolationExc
eption.java:78)
2008-10-14 00:03:28,705 ERBOR [STDERR]
at
070.opencus.db.ChasPbContext.throwException(ChasPbContext.java:213)
2008-10-14 00:03:28,705 ERBOR [STDERR]
org. opencus.db.ChasPbContext.report(ChasPbContext.java:213)

MwcTag

Log-Eintrag

2008-10-14 00:02:14,680 WARN [de.codecembric.comv.cms.modules.ong.tags.ffwcTag] Fehler beim Lesen der AD MMCs föhr die Agentur 'S-Wersichenungsagentur Radevornwald' (Agn: 77610_1): Error reading resource from path "/aussendienst//77610_1_sk radevornwald/privat".

Anzahl Einträge

Prod1 : 2860 Prod2 : 2892

Ursache

Detaillierte Analyse notwendig. Wahrscheinlich handelt es sich hier um Agenturen, die kein entsprechendes Homepage-Verzeichnis besitzen, obwohl dies laut Datenbank der Fall sein sollte. Dies ist jedoch bei den entsprechenden Fällen zu prüfen.

INFO-Einträge

CmsLinkManager

Log-Eintrag

2008-10-14 00:59:50,261 INFO [org.opencms.statice: ort.CmsLinkHanager] Failed to resolve link to resource "

Anzahl Einträge Prod1 : 25689 Prod2 : 24747

Ursache

Für diesen Eintrag gibt es grundsätzlich zwei verschiedene Ursachen. Er entsteht, wenn ein Link in einer JSP erzeugt wird, aber das Ziel ungültig ist.

- Linkanpassung Contentsharing: Hier passen wir die Links zur Laufzeit an und OpenCms erkennt diese Links als Fehler.
- Es sind "tote Links" enthalten. Diese würden auch über die Administrationsoberfläche von OpenCms ermittelt werden können.



CONCLUSION

Back to my promise ...



CONCLUSION

Keep the savings and increase functionality is possible ...

- Open Source / OpenCms enables You to keep control over application & budget!
- OpenCms is stable and expandable enough for intense use it's hard to reach limits.

... as long, as You want to do Your job;-)

- Raising complexity is o.k. if necessary and if someone will manage it!
- Better think in business terms than cost saving, technical solutions etc.!
- Challenge Your running system!
- Always keep in mind that Open Source does not mean You can do things by yourself You have to do so! Every day!



Thank You!

Speaker

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