



Drupal Europe

Darmstadt, Germany

Sep 10 - 14, 2018

www.drupaleurope.org



Drupal Europe
Darmstadt, Germany
10 - 14 September 2018

Contentpool

Centrally editing distributed content!



by Oliver Berndt & Wolfgang Ziegler



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Contentpool

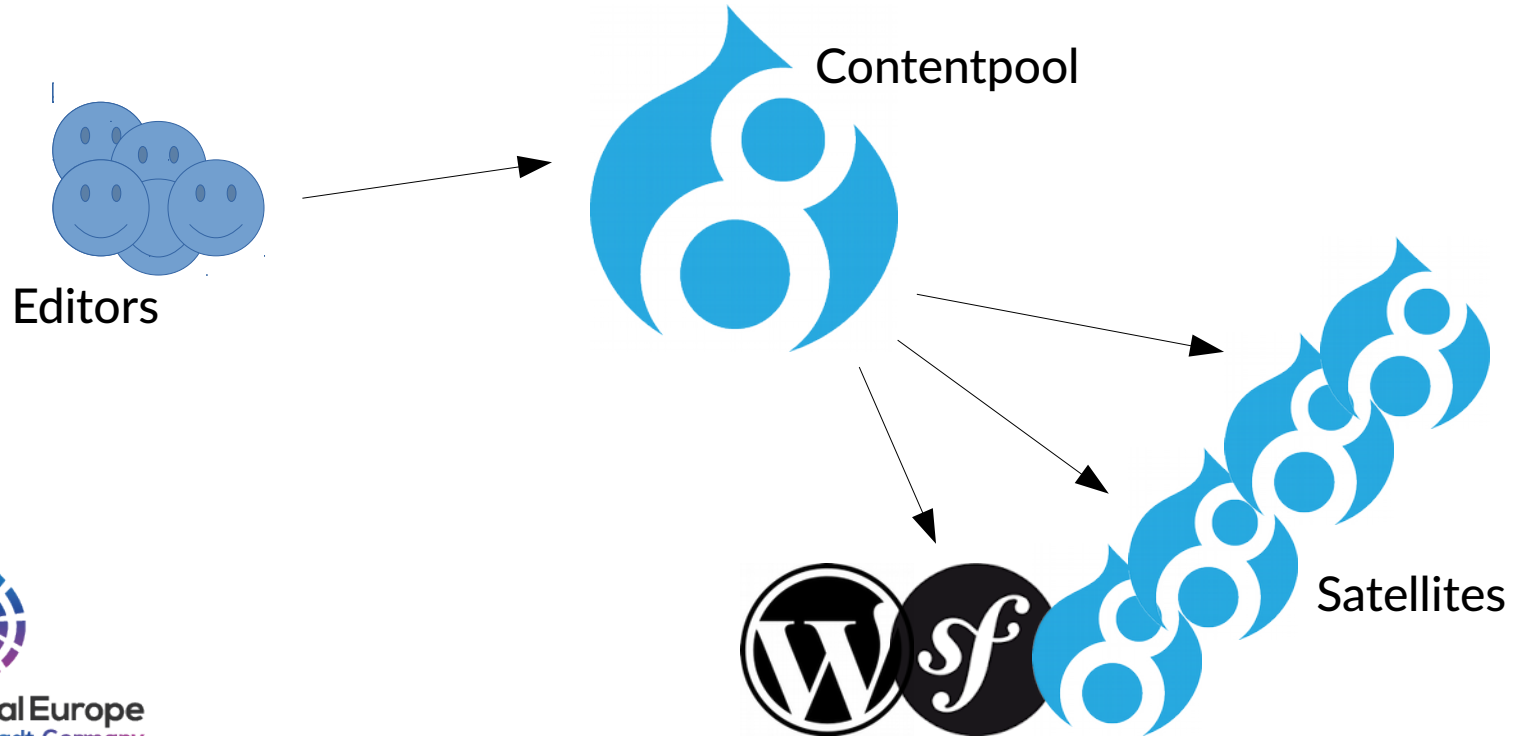
An introduction

What is it?

- Central Contentpool platform distributes content to several websites and provides the editorial backend
- Easy reuse of content (articles, media, ...) on multiple websites



System overview



What is it?

- Central contentpool instance distributes content
- Web sites can communicate via API with the central instance and receive new content and content-updates
- Each website can share content with others



Why?

- Cost reduction via content reuse
- Simpler content workflow through centrally controlled content updates
- Time to market - faster creation of new websites through the use of existing content
- Display content on all digital end-devices





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Case Study

Wirtschaftsverlag

Case Study: Wirtschaftsverlag

About

- Österreichischer Wirtschaftsverlag is Austria's biggest B2B publisher
- The Company is represented with 25 special interest magazines and several service portals (e.g. cloud-solutions for the automotive industry)



Case Study: Wirtschaftsverlag

Digital Strategy

- Company-wide content pool
- Increase coverage
- Create space for industry-related monetization
- Easy maintenance by editorial staff
- Use of all content-types on all publishing platforms
- Enriching content with metadata through semantic analysis



Case Study: Wirtschaftsverlag

Digital Strategy

Content Management System

- Mobile Optimization
- Login area (Paywall)
- People Tracking
- Content tagging
- Dynamic, theme-based content compilation

Content-Pool

- Semantic analysis
- Enrichment of existing content
- Delivery of related content
- Automatically personalized content



Case Study: Wirtschaftsverlag

Contentpool



Case Study: Wirtschaftsverlag

CMS Evaluation: Short profile

Ireds

- Content hierarchical
- Closed Source, 1 Supplier
- Content very customizable

Wordpress

- Content hierarchical
- Open source
- Content is strongly standardized

Drupal

- Content hierarchically & theme based
- Open Source - about 2000 developers
- Content categories are very individual.

Typo3

- Content hierarchical
- Open source
- Content pages-based



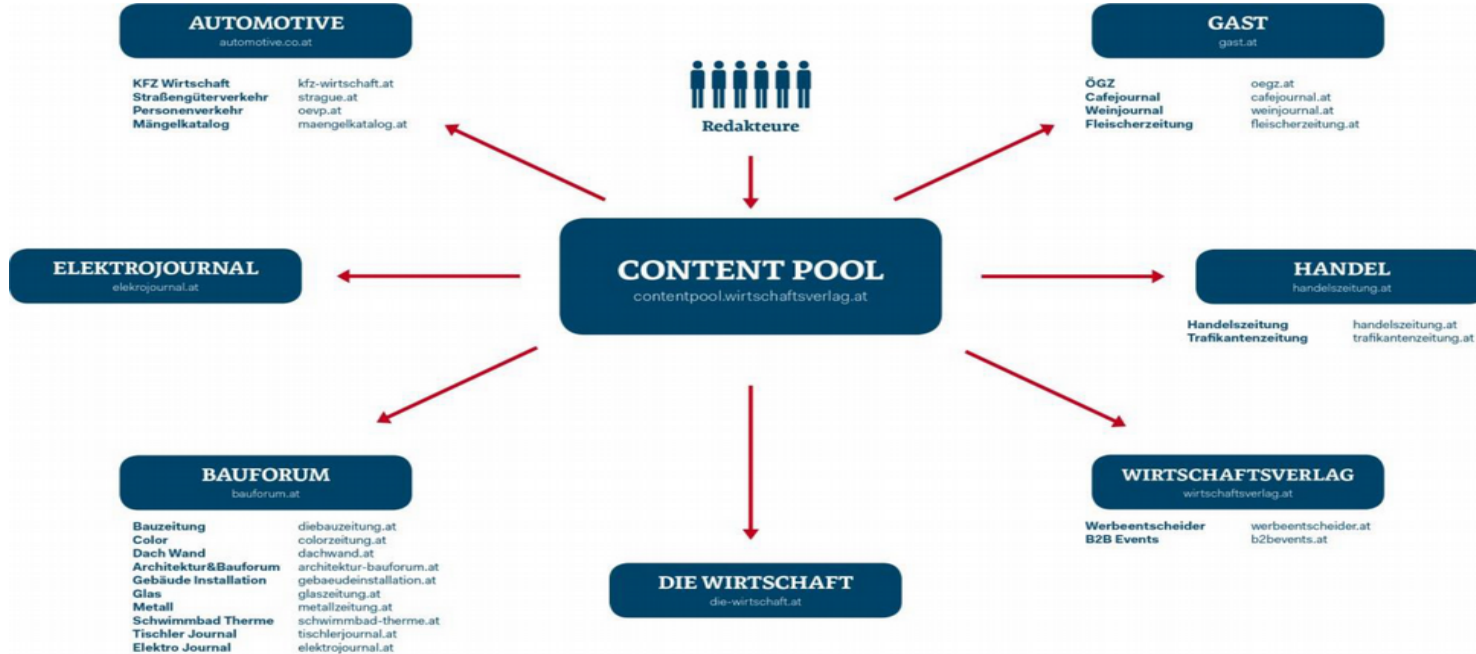
Overview

- The Austrian Wirtschaftsverlag decided to work with the Open Source CMS Drupal 6 in 2011
- Oliver Berndt and Wolfgang Ziegler elaborated the concept for Contentpool 7 (Drupal 7) in 2013
- Contentpool 7 online since 2014
- The conceptual work for Contentpool 8 (Drupal 8/Thunder) started in 2016



Case Study: Wirtschaftsverlag

Contentpool 7



AUTOMOTIVE

Alle Fachmagazine ▾



Jetzt Abo bestellen! >

Newsletter abonnieren >

Mediadaten >



Aktuelles

Meinung

Sonderthemen

Tests

Diashows



Suchbegriff

HOCHVOLT- AUSBILDUNG

in 3 Modulen

Arbeiten mit E-Autos –
der Trend für Ihren Erfolg!



JETZT NEU!



AUTOMOTIVE
AKADEMIE



Aktuelles

Auf zum Sieg

Top Videos

KFZ Wirtschaft



Film ab!

03.08.2017 | Aktuelles

Historischer Rückblick

05.07.2017 | Aktuelles

Toller ORF-Beitrag

01.06.2017 | Aktuelles

Zulassungsstatistik



BAUFORUM

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Home Gebäudehülle Gebäudetechnik Innenausbau Außenbereich

Suchbegriff

Intelligentes Bauen heißt Verantwortung übernehmen.



Meldungen



Projektkontrolle mit dem iPad
Metall- und Infotech, 19.09.2017



WorldSkills: Handwerk auf Weltklasse-Niveau
Aktuelles, 19.09.2017



Stahlstützen für Neu Delhi
Aktuelles, 19.09.2017



Sohalung für alle Fälle
Aus der Branche, 19.09.2017



Innovation that excites

DER NEUE NISSAN X-TRAIL

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[Hotellerie](#)
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[Szene](#)
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DER NEUE AGM WEINKATALOG 17/18

JETZT ONLINE UND IN ALLEN MÄRKTEN!

AGM

Tourismus



Digitalisierung: Wie man Gewinner wird

Meldungen

Gastro-Comeback für Kell

21.09.2017 | Gastronomie

Wünsche an die Regierung

21.09.2017 | Hotellerie

Burger-Kette Peter Pane kommt nach Österreich

18.09.2017 | Gastronomie

MARKTFÜHRER


Innovation that excites

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**JETZT AB
€ 24.680,-**

die wirtschaft

Specials -



- Jetzt Abo bestellen! >
- Newsletter abonnieren >
- Mediadaten >

Home Stories Interviews Meinungen

Suchbegriff

Cyber Security

11. Oktober 2017 ab 16.00 Uhr, Linz

Gefahr Hackerangriff:

Wie Sie Ihr Unternehmen schützen können!



Stories

Über uns

Die Wirtschaft



Film ab!

09.08.2017 | Stories

Meldungen

Anna McDonald neue Letterin der IV-Kommunikation

28.07.2017 | Stories



Case Study: Wirtschaftsverlag

Contentpool 7

The screenshot shows a list of content sections under the heading 'MEDIUM'. A red callout box points to the 'Bauzeitung' entry, which is marked with a green checkmark. The other entries are marked with grey squares.

Section	Status
Automotive	Not Selected
Werbeentscheider	Not Selected
Bauforum	Not Selected
Bauzeitung	Selected
Color	Not Selected
Dach Wand	Not Selected
Architektur & Bauforum	Not Selected
Gebäude Installation	Not Selected
Glas	Not Selected
Metall	Not Selected
Schwimmbad + Therme	Not Selected
Tischler Journal	Not Selected
Elektrojournal	Not Selected
Handelszeitung	Not Selected



Case Study: Wirtschaftsverlag

Contentpool 7

MEDIUM *

- Automotive
- Werbeentscheider
- Bauforum
 - Bauzeitung
 - Color
 - Dach Wand
 - Architektur & Bauforum
 - Gebäude Installation
 - Glas
 - Metall
 - Schwimmbad + Terme
 - Tischler Journal
- Elektrojournal
- Handelszeitung

PRIMÄRES MEDIUM *

- Automotive
- Werbeentscheider
- Bauforum
 - Bauzeitung
 - Color
 - Dach Wand
 - Architektur & Bauforum
 - Gebäude Installation
 - Glas
 - Metall
 - Schwimmbad + Terme
 - Tischler Journal
- Elektrojournal
- Handelszeitung

Selection of the primary section (Magazine) - Use of canonical tags to avoid duplicate content



Case Study: Wirtschaftsverlag

Contentpool advantages

- Central publishing and delivery based upon sections
- Easy deployment of new features on all sites
- Updates are instant on all sites and invalidate caches (including varnish)
- Easy to move articles or mediums across sites (e.g. Werbeentscheider)



... KANN NICHT GEGE
SONDERN MUSS
FUNDEN WERDEN«

Vik



Case Study: Wirtschaftsverlag

Team

- Oliver Berndt Product Owner
former Head of Digital Services media-c
Wirtschaftsverlag
- Wolfgang Ziegler Technical Architect dronomics
- Dominic Prüll Technical Lead Wirtschaftsverlag
- David Fröhlich Web Development W1 Omnichannel Marketing
- Aladin Chaibi Content Management Wirtschaftsverlag





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Contentpool 8

The new Drupal 8 Distribution

Requirements & Goals (1)

- Contentpool is the central source of content
- Editors directly edit content on the contentpool
- Sites can fetch content based upon pre-defined filters (e.g. by channel, topic)
- Changes show up instantly after editing
- Full support for Thunder (Paragraphs, Media)

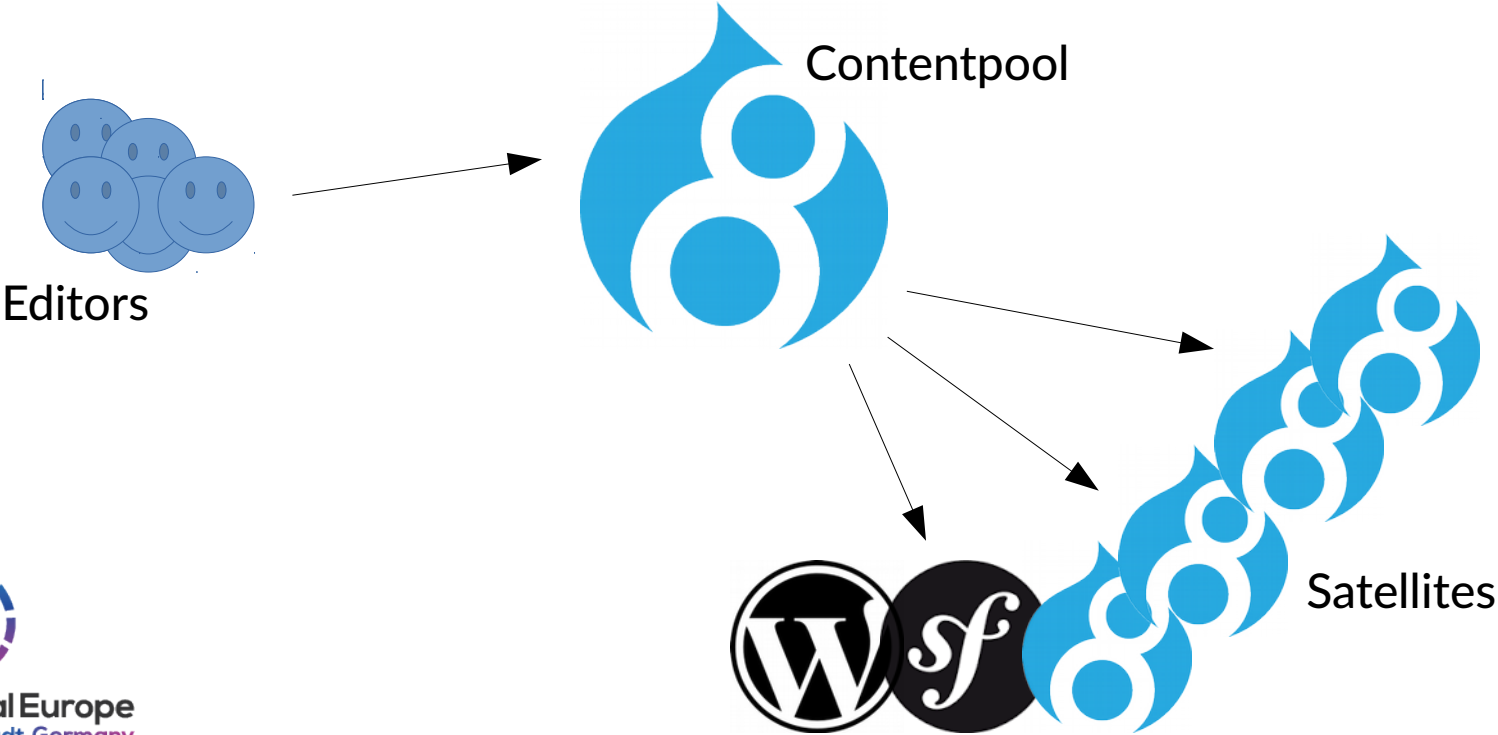


Requirements & Goals (2)

- Support for custom data structures
 - Cover custom fields and paragraphs
 - Cover other entities/data besides articles
- Content can be re-used by non-Drupal sites
- Provide an API for 3rd-parties



System overview



Lessons learned from Drupal 7

- Drupal 7 contentpool using remote entities & central Solr
- Avoid a run-time dependency on the contentpool
 - Satellites must keep working when the contentpool is down; e.g. for a maintenance update
- Avoid strong coupling between contentpool & satellites
 - Avoid changes that require orchestrated updates
 - Ease development of satellites



Content replication

- Store content again on satellite sites
 - Replicate / synchronize changes to satellites
 - Avoid conflicts by preventing changes on satellites!
 - UX: When trying to edit content on satellites
redirect editors to the contentpool
- ✓ No run-time dependency!



Implementing replication

- Don't – it's done!
- Robust replication powered by the Replication module
- Implements CouchDB replication protocol
 - via RelaxedWS
- Module suite around the Deploy module and the Workflow initiative
- <http://www.drupaldeploy.org/>



Replication module

Pros:

- Robust and tested replication based upon entity revisions
- Don't re-invent the wheel, join forces
- Extensible thanks to existing integrations with Content moderation & Workspace

Cons:

- Difficult to setup → taken care of by the distribution!



Contentpool – The distribution!

- Builds upon the Thunder distribution
 - Working out-of-the box functionality
 - Functionality needed by publishing sites is pre-configured (Media, Paragraphs, Better Admin Theme)
 - Provides sensible defaults that can be altered as needed
 - Extended it with a pre-configured Replication module suite
- ... and some code to adjust it to the use case!



Contentpool – Replication features

- Replicates articles and taxonomies (channels) to satellites
- Extends the replication to include necessary referenced entities
(Media entities, Tags, ...)
- Allows filtering replicated articles by channel
 - Feature works with all term-relationships of articles
 - UI for configuring filters



Replication filter selection

- UI powered by vue-treeselect.js.org
 - Works well for high amount of terms
- Fetches from the contentpool via API
- Support for hierarchical filters
 - Subscribe to the parent term to get articles of all children
- Filter by any term reference field of articles
 - OR matching → Subscribe to channel and topics.



Replication filter ☆

Bearbeiten

Replication filter

[Startseite](#) » [Verwaltung](#) » [Konfiguration](#) » [Webservices](#) » [Entfernt](#)

Channel

Replicate content if it is associated with any of the selected terms.

Bauzeitung x x ▲

- ▼ **Automotive**
 - ▶ **KFZ-Wirtschaft**
- ▼ **Bauforum**
 - Bauzeitung**
 - Tischlerjournal**

Replicate content if it is associated with any of the selected terms.

Select... ▼

Themen

Replicate content if it is associated with any of the selected terms.

Select... ▼

Contentpool Client module

- Adds in everything that's necessary for a satellite
 - Replication module suite
 - Data model as needed for the replication
 - Provides replication filter form
- Makes it easy to connect to a contentpool:

```
drush cps https://replicator:PASS@example.com/relaxed
```



Distribution development status

- Working alpha version
 - Replication
 - Automated test-coverage
 - TODO: API for 3rd parties (JSON API)
- Current release: 1.0.0-alpha2
- Under development – stable release until end of 2018!
- Next: Replication edge-cases & initial sync performance



LIVE DEMO



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Replication: There are many details...

- Data structure must match! (mostly)
 - Fields must match or be excluded!
 - Extend `contentpool_data_model` as needed
- Files get replicated and stored on satellites
- URL patterns are not replicated – satellites are in control!
- Canonical URL Meta-Tag needed for SEO [wip]



Loose coupling?

- Problem:
 - Every change on the data structure needs to be deployed to all the satellites
- Solution:
 - Simplify the required data structure and avoid changes



Loose coupling: Avoid data structure changes

- Observation:
 - After setting up article data structure (with metadata) most changes concern paragraphs & article rendering
- Conclusion:
 - Do not replicate paragraphs as Drupal entities
 - Provide pre-rendered default markup for paragraphs
 - Provide a JSON structure for paragraphs for custom rendering



Pre-rendering paragraphs: Custom elements

- New module: drupal.org/project/custom_elements
- Provide custom markup

```
<pg-image data-img-src="/path/to/image"  
  data-field-copyright="(c)drunomics GmbH"  
  data-field-caption="Beautiful image!"  
>
```

- Render custom markup with JavaScript (Vue.js, ReactJS, ...)
- Provide JavaScript assets for simple default rendering
 - includes (un-branded) default styling
 - Avoid re-implementation of article rendering across systems!



Coming: Custom elements for sharing with 3rd party sites

- API for fetching latest X teasers of channel Y
 - Skip replication for 3rd parties, but cache responses.
- Results contain pre-rendered teasers
 - as custom elements
 - ready-to-go Javascript for rendering
 - can be loaded server-side or fully client-side



Single Sign-on across sites?

- Centralized access and authorization control
- Automated session pickup makes switching sites convenient
- Solution for Drupal 7 exists, but...

missing piece of the puzzle for Drupal 8!



Our Vision: Contentpool extensions

- Kick-start satellite sites!
 - Ready-to-go package
 - Customizable theme for small and medium-sized publishers
 - With content analysis and ad-server integration
- Co-operations with Industry Partners:
 - Fast an easy creation of new magazine websites in the cloud
 - Integration of an innovative web-to-print solutions for standardized magazine productions



Thank you!

- Questions?
- Feedback? Do you have different use-cases?

