

# Drupal + CDNs

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Wim Leers

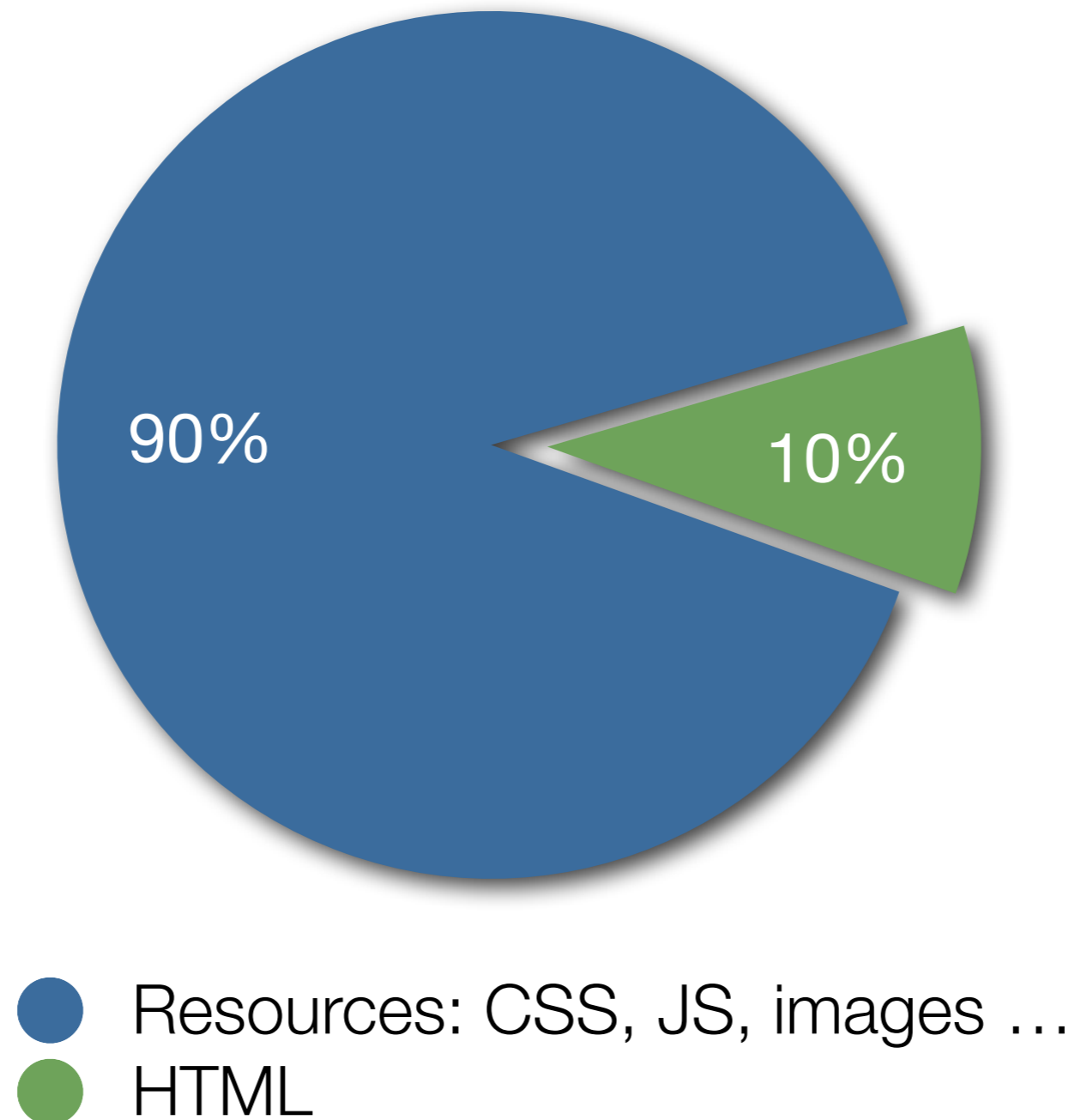
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# Terminology: page loading performance

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CDN usage: resources  $\leftrightarrow$  everything

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## Resources (step 1)

- Affects 90% of page load time
- Your app server still in control
- Easy, especially with Origin Pull
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**In both scenarios: less requests to app server, i.e. positive impact**

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- Drupal 8: Symfony’s `HttpKernel` component
  - Every part (block) of a page can be requested individually
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  - i.e.: Drupal itself will use ESI internally!

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  - Every part (block) of a page can be requested individually
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  - i.e.: Drupal itself will use ESI internally!
- Result: ESI on a CDN becomes almost trivial (but not every CDN supports ESI)

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	Pull	Push
transfer protocol	automatically	FTP, SFTP, rsync, WebDAV, Amazon S3 ...
+	virtually no setup	flexibility no redundant traffic
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# Key Properties of a CDN

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- Populating: Pull versus Push
- Lock-in

	Pull	Push
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- Support & costs

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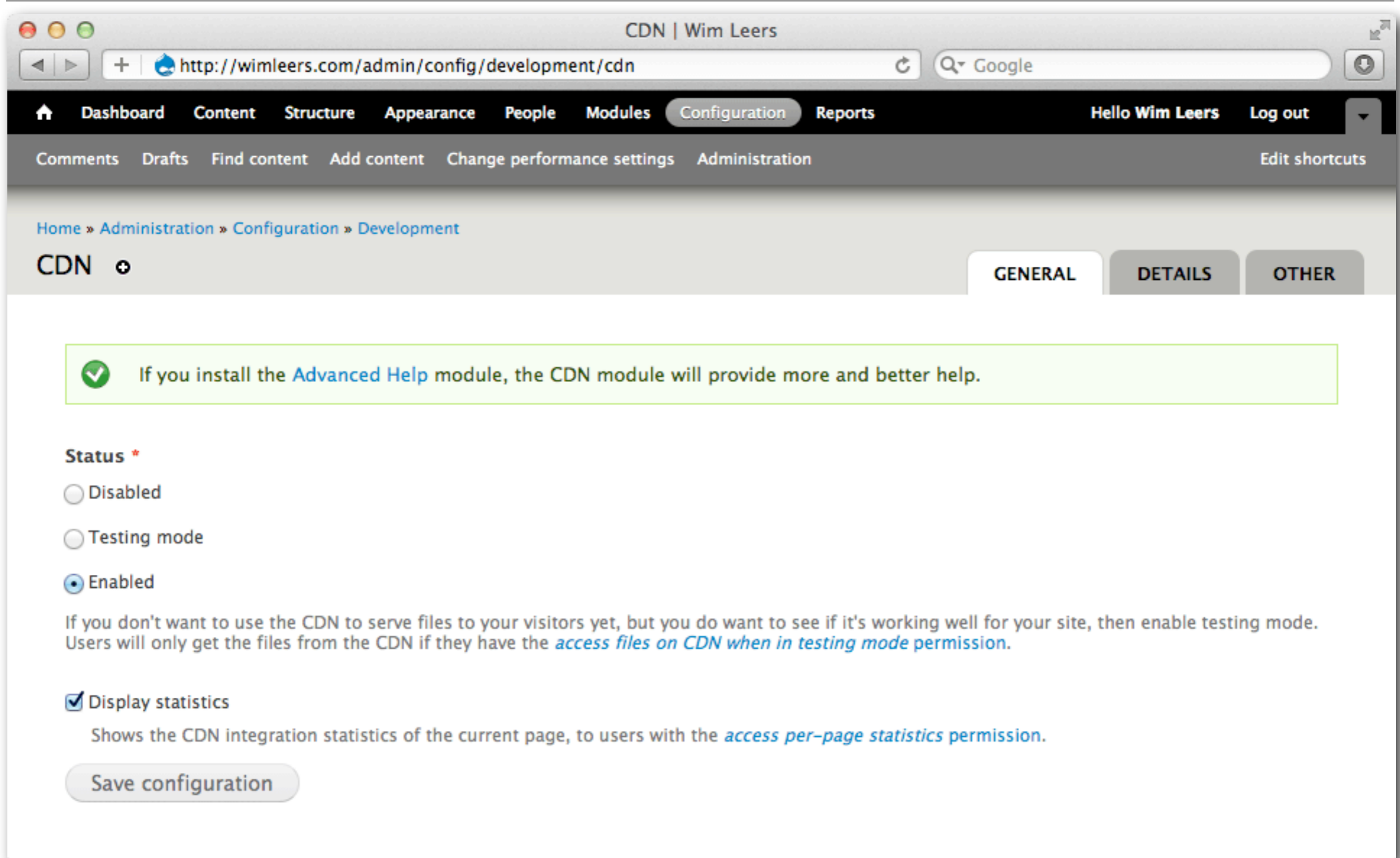
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- Auto-balancing over multiple CDN domain names

# Maximally exploiting a CDN for resources

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- DNS prefetching
- Auto-balancing over multiple CDN domain names
- “Far Future expiration”
  - Browser cache is faster than CDN
  - Mark files to expire years from now (“far future expiration headers”)
  - Unique file URLs
  - Cheaper!

# Drupal CDN module



The screenshot shows the Drupal administration interface for the CDN module. The browser address bar displays `http://wimleers.com/admin/config/development/cdn`. The navigation menu includes Dashboard, Content, Structure, Appearance, People, Modules, Configuration (selected), and Reports. The user is logged in as Wim Leers. The breadcrumb trail is Home » Administration » Configuration » Development. The CDN module is expanded, showing tabs for GENERAL, DETAILS, and OTHER. A green message box states: "If you install the [Advanced Help](#) module, the CDN module will provide more and better help." Under the "Status" section, the "Enabled" radio button is selected. Below this, a note explains that testing mode can be used for development. The "Display statistics" checkbox is checked, and a note explains that it shows integration statistics. A "Save configuration" button is at the bottom.

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[Dashboard](#) [Content](#) [Structure](#) [Appearance](#) [People](#) [Modules](#) **Configuration** [Reports](#) [Hello Wim Leers](#) [Log out](#)

[Comments](#) [Drafts](#) [Find content](#) [Add content](#) [Change performance settings](#) [Administration](#) [Edit shortcuts](#)

[Home](#) » [Administration](#) » [Configuration](#) » [Development](#)

CDN [+](#)

**GENERAL** **DETAILS** **OTHER**

 If you install the [Advanced Help](#) module, the CDN module will provide more and better help.

**Status \***

Disabled

Testing mode

Enabled

If you don't want to use the CDN to serve files to your visitors yet, but you do want to see if it's working well for your site, then enable testing mode. Users will only get the files from the CDN if they have the [access files on CDN when in testing mode permission](#).

Display statistics

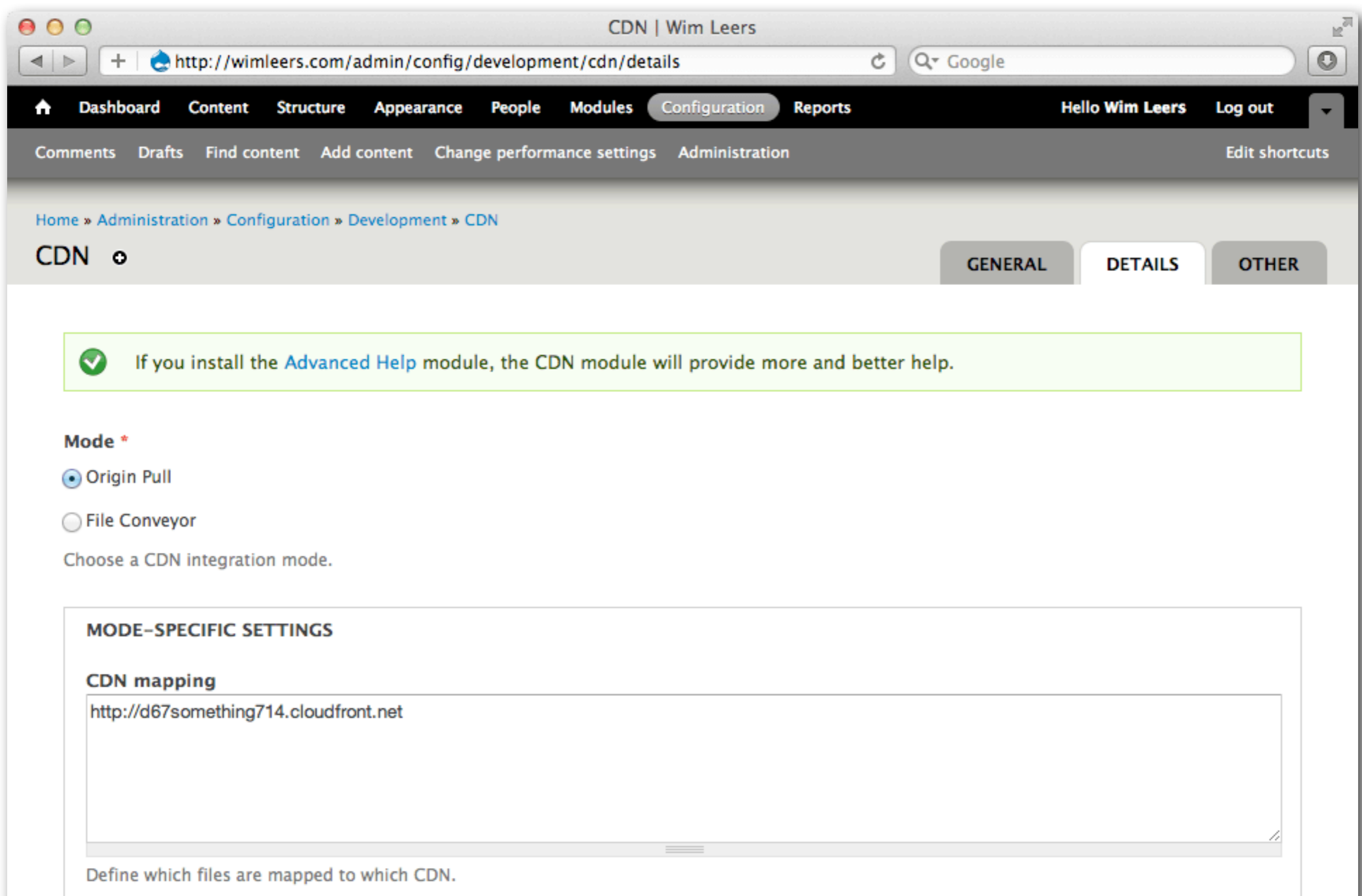
Shows the CDN integration statistics of the current page, to users with the [access per-page statistics permission](#).

[Save configuration](#)

More: <http://wimleers.com/article/easy-drupal-cdn-integration-for-fun-and-profit>



# Drupal CDN module



The screenshot shows the Drupal administration interface for the CDN module configuration. The browser address bar displays the URL `http://wimleers.com/admin/config/development/cdn/details`. The navigation menu includes Dashboard, Content, Structure, Appearance, People, Modules, Configuration (selected), and Reports. The user is logged in as Wim Leers. The breadcrumb trail is Home » Administration » Configuration » Development » CDN. The configuration page has three tabs: GENERAL, DETAILS (selected), and OTHER. A green message box states: "If you install the [Advanced Help](#) module, the CDN module will provide more and better help." The "Mode" section has two radio buttons: "Origin Pull" (selected) and "File Conveyor". Below this is the instruction "Choose a CDN integration mode." The "MODE-SPECIFIC SETTINGS" section includes a "CDN mapping" text area containing the URL `http://d67something714.cloudfront.net`. At the bottom, there is a note: "Define which files are mapped to which CDN."

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[Home](#) » [Administration](#) » [Configuration](#) » [Development](#) » [CDN](#)

CDN +

GENERAL DETAILS OTHER

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**Mode \***

Origin Pull

File Conveyor

Choose a CDN integration mode.

**MODE-SPECIFIC SETTINGS**

**CDN mapping**

`http://d67something714.cloudfront.net`

Define which files are mapped to which CDN.

## MODE-SPECIFIC SETTINGS

### CDN mapping

```
http://d67something714.cloudfront.net
```

Define which files are mapped to which CDN.

Far Future expiration

Mark all files served from the CDN to expire in the far future — improves client-side cacheability.

**Note:** this requires the ["Aggregate and compress CSS files"](#) performance setting to be enabled (or your site will break).

### Unique file identifier generation

```
misc/*:modules/*:themes/*|drupal_version  
sites/*|mtime  
sites/*|.avi .m4v .mov .mp4 .wmv .flv|perpetual
```

Define how unique file identifiers (UFIs) are generated.

▶ [AVAILABLE UFI METHODS](#)

Save configuration

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# Drupal CDN module: when *not* to use it

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- When every millisecond matters (e.g. when you can't cache pages)
  - Designed for ease of use and front-end performance, not back-end performance
- When your site has a *very* complex CDN mapping
  - CDN module has `cdn_pick_server()` callback supports complex mappings

# Measuring performance: SUM vs. RUM

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- “Synthetic”: test script, only a few browsers, controlled environment
  - Not realistic
  - Great as reference point for tracking performance as site evolves



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- Ideally: like *Continuous Integration* also *Continuous Performance Monitoring!*
- “Synthetic”: test script, only a few browsers, controlled environment
  - Not realistic
  - Great as reference point for tracking performance as site evolves
- “Real”: actual visitors, all browsers, real-world environment
  - Very realistic
  - Ability to see in which specific location or browser site performance is good/bad

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  2. Install “real user monitoring” (RUM) performance measurements: e.g. New Relic RUM or Torbit Insight
  3. Compare results
- Free measurements, but no analysis or UI — if you want to roll your own:
    - <http://drupal.org/project/episodes>
    - [http://drupal.org/project/navigation\\_timing](http://drupal.org/project/navigation_timing)