

How to Audit Drupal Sites

for performance, content
and best practices

about.me/jonpeck

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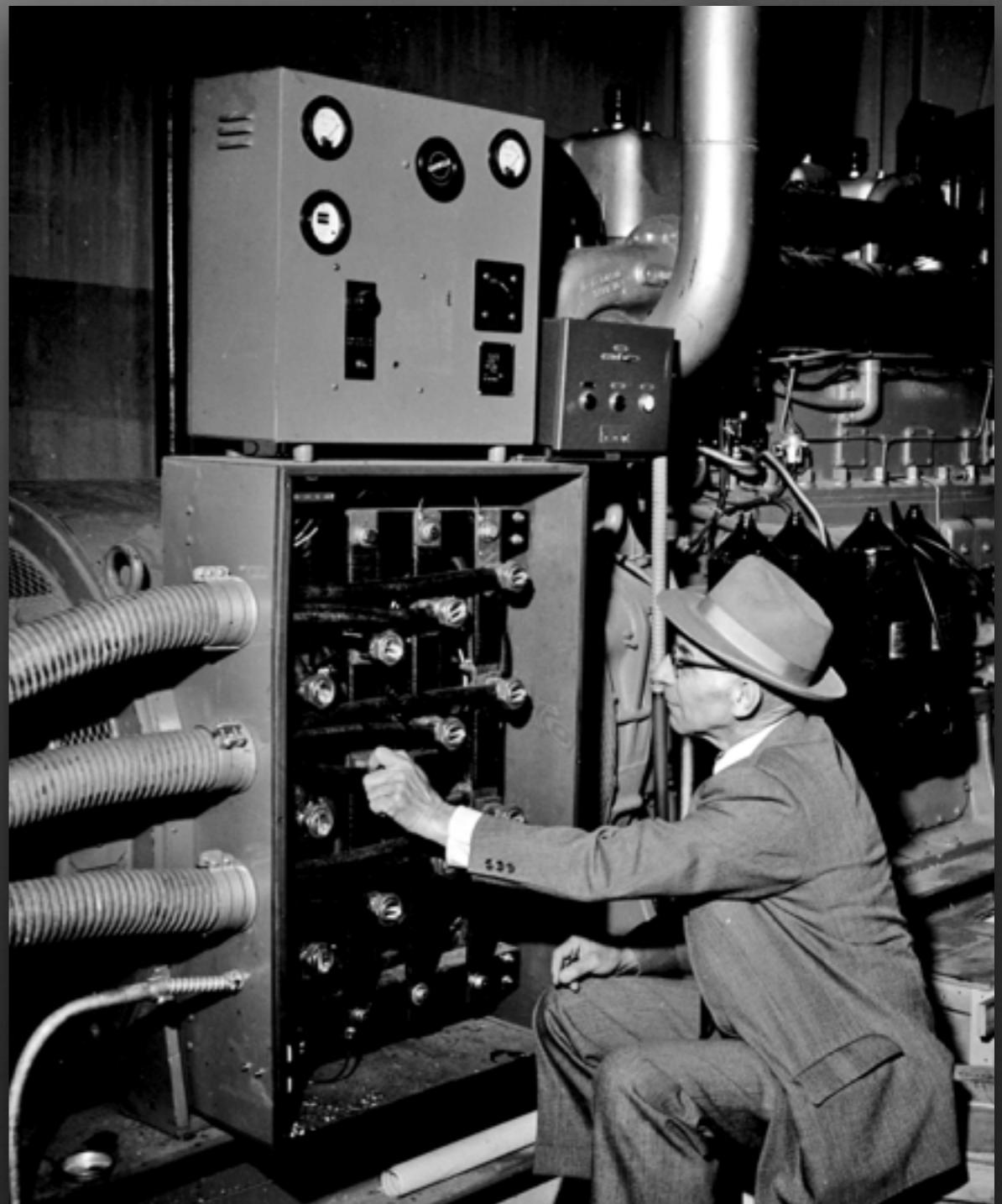


Jon Peck

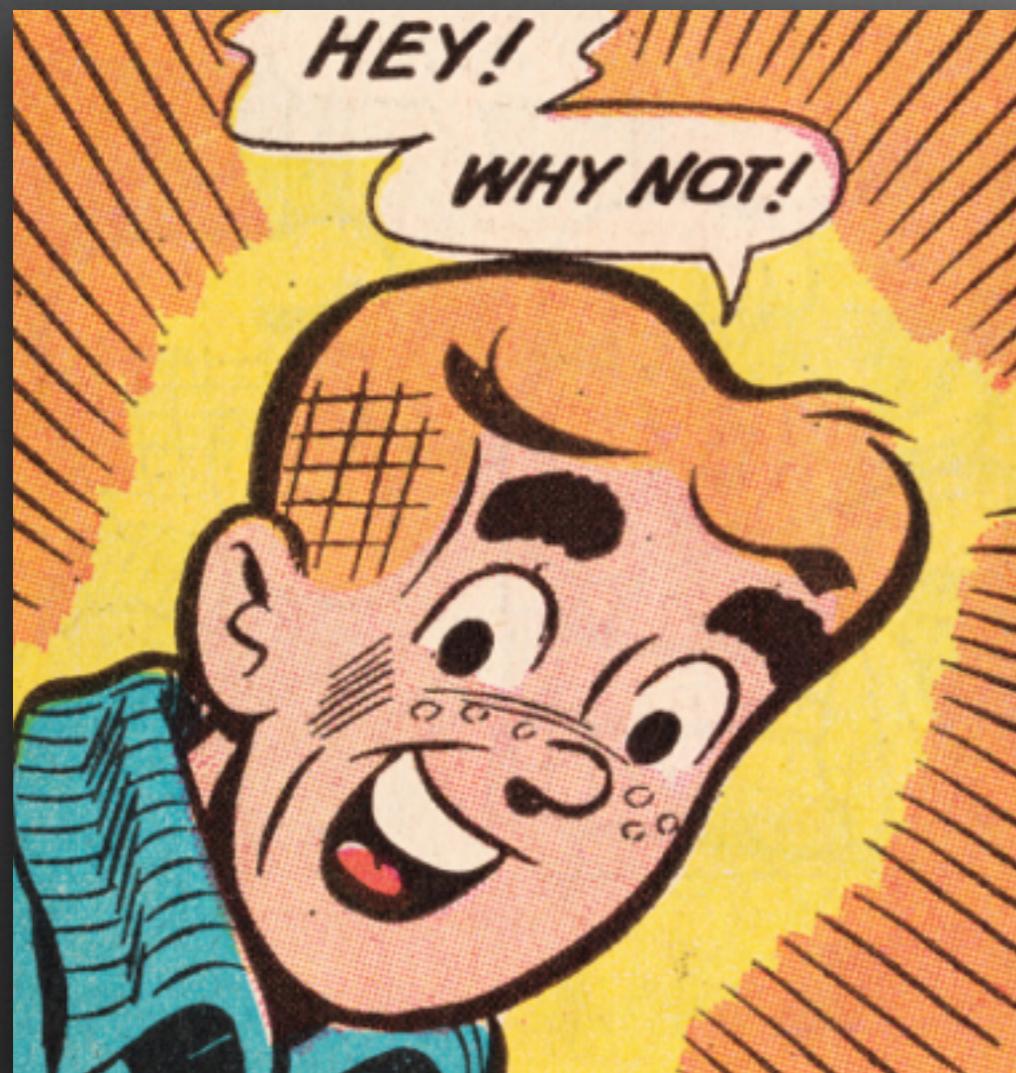
Senior Engineer at FourKitchens.com
[@FluxSauce](https://github.com/FluxSauce) - github.com/fluxsauce - drupal.org/u/fluxsauce

What is an audit?

- official inspection of accounts
- validate the good things
- highlight areas of improvement



Why audit sites?



- Learn about contents and structure
- Ensure optimal configuration
- Discover areas of improvement

Every site is unique, but...

- Built with the same framework
- Similar architectural requirements
- One size fits most



Effective auditing

- Consistent
- Quantifiable
- Contextually aware
- Easy to understand
- Actionable recommendations



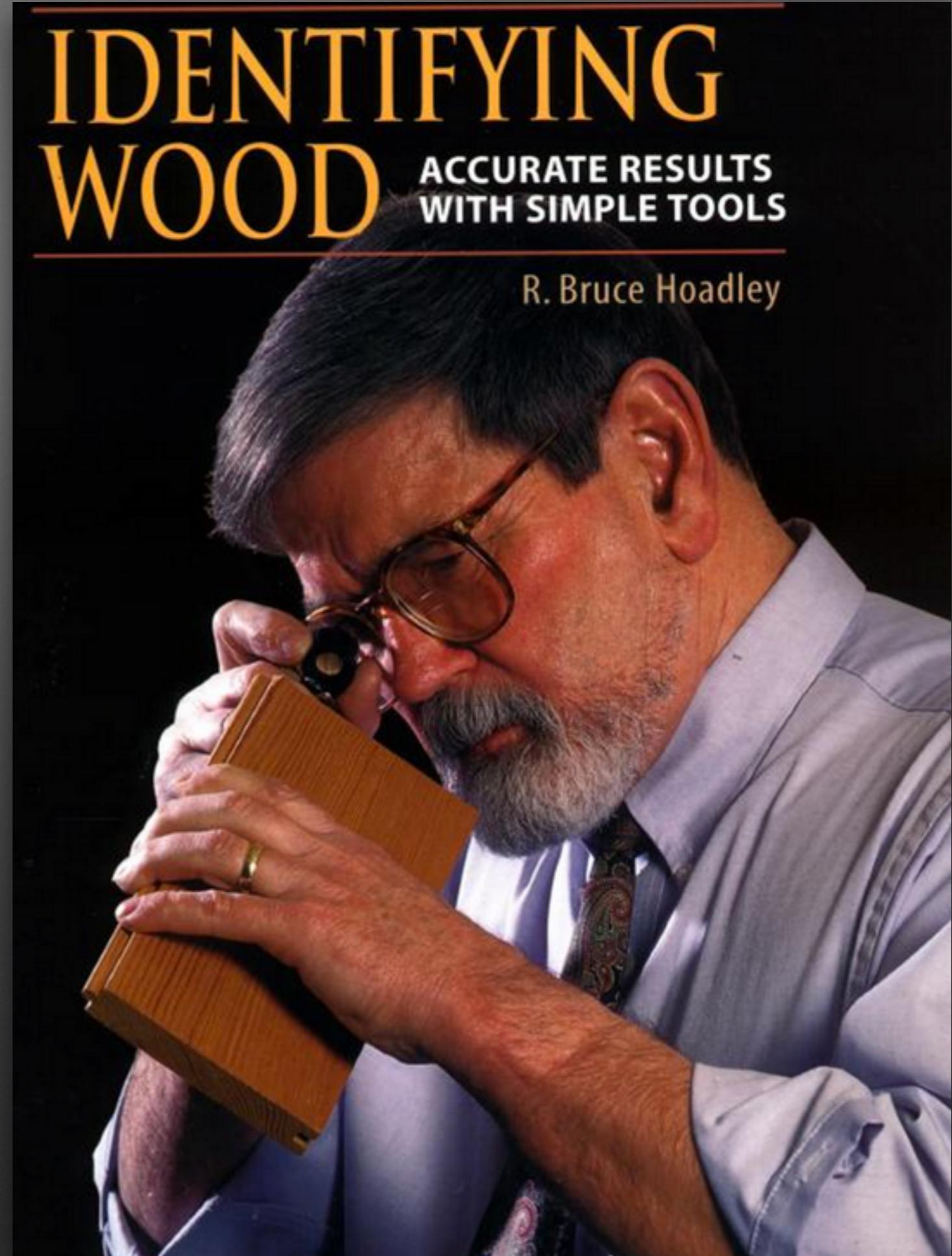
Static program analysis

- Performance & behavior gathering
- Does **not** execute
- Non-intrusive
- Automated

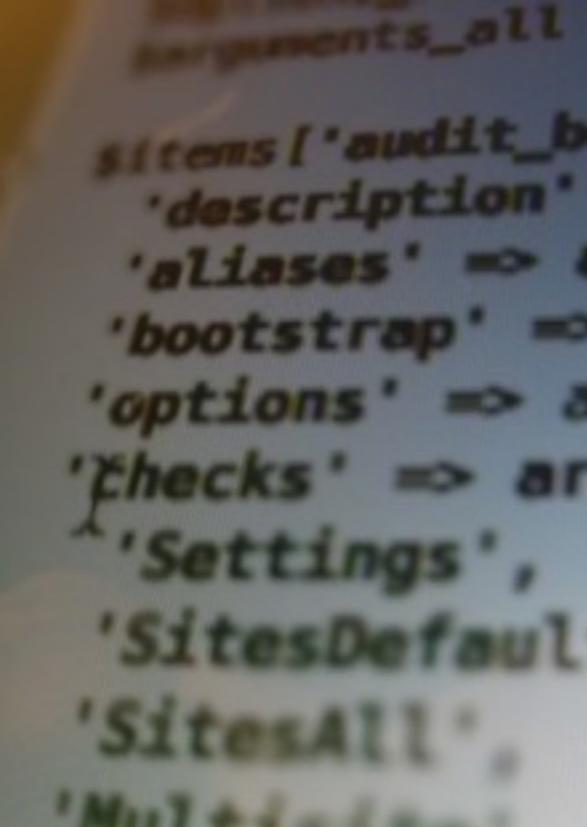


Tools for Auditing

Yup, it's wood.



Site Audit

- https://www.drupal.org/project/site_audit
 - Drupal 7 and 8 site analyzer
 - Drush command on target platform
 - Reports in many formats
 - Powers Launch Check on Pantheon

```
arguments_all = array(...)

$items['audit_best_practices'] = [
  'description' => dt('Audit best practices'),
  'aliases' => array('abp'),
  'bootstrap' => DRUSH_BOOTSTRAP_DRUPAL,
  'options' => array_merge($site->options, [
    'checks' => array(
      'Settings',
      'SitesDefault',
      'SitesAll',
      'Multisite',
      'SitesFrontend',
    ),
  ]),
];
```

What does Site Audit check?

- Best Practices
- Block
- Cache
- Codebase
- Content
- Cron
- Database
- Extensions
- Front End
- Security
- System Status
- Users
- Views
- Watchdog

What doesn't Site Audit analyze?

- Usability and site experience
- Aesthetics
- Semantic content



Usage

drush help --filter=site_audit

Tools for auditing a Drupal site: (site_audit)

audit_all (aa)	Executes every Site Audit Report
audit_best_practices (abp)	Audit best practices used.
audit_block (ab)	Audit Block.
audit_cache (ac)	Audit Drupal's caching settings.
audit_codebase (acb)	Audit the codebase.
audit_content (acn)	Audit content.
audit_cron (acr)	Audit cron.

drush audit_cache

Drupal's caching settings: 31%

Anonymous caching

Anonymous page caching is not enabled!

[error]

Go to /admin/config/development/performance and check "Cache pages for anonymous users".

Minimum cache lifetime

Minimum cache lifetime is set to 1 min.

[warning]

Go to /admin/config/development/performance and set "Minimum cache lifetime" to none.

Expiration of cached pages

Expiration of cached pages not set!

[error]

Go to /admin/config/development/performance and set "Expiration of cached pages" to 15 min or above.

Cached page compression

Cached pages are not compressed!

[error]

Go to /admin/config/development/performance and check "Compress cached pages".

Aggregate and compress CSS files in Drupal

CSS aggregation and compression is not enabled!

[error]

Go to /admin/config/development/performance and check "Aggregate and compress CSS files".

Aggregate JavaScript files in Drupal

JavaScript aggregation is not enabled!

[error]

Go to /admin/config/development/performance and check "Aggregate JavaScript files".

drush ac --detail

```
Aggregate and compress CSS files in Drupal: Verify that Drupal is aggregating and compressing CSS.  
CSS aggregation and compression is not enabled!  
Go to /admin/config/development/performance and check "Aggregate and compress CSS files".  
Aggregate JavaScript files in Drupal: Verify that Drupal is aggregating JavaScript.  
JavaScript aggregation is not enabled!  
Go to /admin/config/development/performance and check "Aggregate JavaScript files".  
Lock API: Determine the default locking mechanism.  
Using sites/all/modules/contrib/redis/redis.lock.inc  
Caching backends: Detail caching backends.  
The following caching backends are being used: sites/all/modules/contrib/redis/redis.autoload.inc  
Default class: Determine the default cache class, used whenever no alternative is specified.  
Using Redis_Cache.  
Cache bins: Detail explicitly defined cache bins.  
Bin: Class  
-----  
cache_class_cache_form: DrupalDatabaseCache
```

JSON output

drush audit_cron --json

```
{  
  "checks": {  
    "SiteAuditCheckCronEnabled": {  
      "action": "Please visit /admin/config/system/cron and set the cron frequency to something other than Never.",  
      "description": "Check to see if cron is scheduled to run.",  
      "label": "Enabled",  
      "result": "You have disabled cron, which will prevent routine system tasks from executing.",  
      "score": 0  
    },  
    "SiteAuditCheckCronLast": {  
      "action": null,  
      "description": "Time Cron last executed",  
      "label": "Last run",  
      "result": "Cron last ran at Thu, 09 Jan 2014 21:47:36 +0000 (9 months 4 days ago)",  
      "score": -1  
    },  
    "SiteAuditCheckCronRunning": {  
      "action": null,  
      "description": "Check to see if cron is actively running.",  
      "label": "Running",  
      "result": "Cron is not currently running.",  
      "score": -1  
    }  
  },  
  "label": "Cron",  
  "percent": 0  
}
```

HTML Output

drush audit_best_practices --html --detail

Best practices 93%

sites/default/settings.php - Check if the configuration file exists.

settings.php exists and is not a symbolic link.

sites/default - Check if it exists and isn't symbolic

sites/default is a directory and not a symbolic link.

sites/all - Check if it exists and isn't symbolic

sites/all is a directory and not a symbolic link.

Multi-site - Detect multi-site configurations.

No multi-sites detected.

Superfluous files in /sites - Detect unnecessary files.

No unnecessary files detected.

Fast 404 pages - Check if enabled.

Fast 404 pages are not enabled.

See <https://drupal.org/node/1313592> and default.settings.php for details on how to implement.

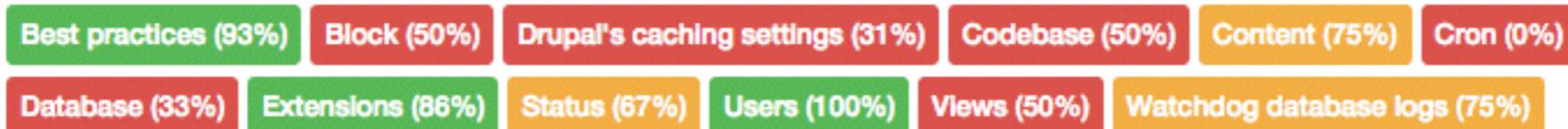
PHP Filter - Check if enabled.

PHP Filter is not enabled.

Audit All

drush aa --skip=insights --html --bootstrap

Summary



Best practices 93%

Fast 404 pages

Fast 404 pages are not enabled.

See <https://drupal.org/node/1313592> and default.settings.php for details on how to implement.

[Back to top](#)

Block 50%

Caching

Block caching is not enabled!

Go to /admin/config/development/performance and check "Cache blocks".

Extending site_audit

- Modules can implement both checks and reports
- Feature requests in issue queue
 - [GitHub](#) and [drupal.org](#)



Share your checks!



Care[♥]Bears

Sharing
is Caring

Unused Modules

PROJECT	PROJECT HAS ENABLED MODULES	PROJECT PATH
acquia_agent	No	sites/all/modules/contrib/acquia_connector/acquia_agent
acquia_search	No	sites/all/modules/contrib/acquia_connector/acquia_search
acquia_spi	No	sites/all/modules/contrib/acquia_connector/acquia_spi
admin_icons	No	sites/all/modules/contrib/admin_icons

- https://www.drupal.org/project-unused_modules
- Lists unused modules and projects that can be safely deleted
 - Ignores disabled child modules

Security Review

Review results from last run Wed, 06/24/2015 – 13:42

Here you can review the results from the last run of the checklist. Checks are not always by expanding the fieldset above.

Untrusted roles do not have administrative or trusted Drupal permissions.

✖ Base URL is not set in settings.php.

✖ Errors are written to the screen.

PHP files in the Drupal files directory cannot be executed.

Dangerous tags were not found in any submitted content (fields).

Drupal installation files and directories (except required) are not writable by the server.

Untrusted users are not allowed to input dangerous HTML tags.

- https://www.drupal.org/project/security_review
- Checks site and hosting configuration, site content for security problems

Hacked!

The screenshot shows a comparison report for a Drupal installation. It lists modules and themes along with their current status relative to the latest version on drupal.org.

Category	Name	Status
Drupal core	Drupal 6.14	Unchanged ✓
	0 files changed, 0 files deleted View details of changes Includes: Block, Color, Comment, Database logging, Filter, Garland, Help, Menu, Node, System, Taxonomy, Update status, User	
Modules	Administration menu 6.x-1.5	Unchanged ✓
	0 files changed, 0 files deleted View details of changes Includes: Administration menu	
	Devel 6.x-1.18	Changed! ✗
3 files changed, 0 files deleted View details of changes Includes: Devel, Devel generate		
Diff 6.x-1.18-6.x-1.19		Download

- <https://www.drupal.org/project/hacked>
- Compares Drupal, contrib modules and themes with version on drupal.org
- Does not have Git support yet

Cache Audit

panels	Pane	Region	Cache	Lifetime	Granularity
Panel	node:body	center			<not set>
Summit	events_view-panel_pane_3	links			<not set>
Summit	node:field_event_date_and_time	main_			<not set>
Summit	node:field_event_agenda	main_			<not set>
Summit	node:field_sponsor_logo	main_			<not set>
Summit	node:field_sponsor_logo	main_			<not set>
Summit	node:field_sponsor_logo	main_			<not set>
Panel	events_view-panel_pane_2	middle			<not set>
Panel	custom	middle			<not set>
Panel	attendees-panel_pane_2	middle			<not set>

- <https://www.drupal.org/project/cacheaudit>
- Reports caching settings of Drupal core, Block, Views, Panels
- Panels is unique (not in Site Audit)

PHP_CodeSniffer / Coder

- https://github.com/squizlabs/PHP_CodeSniffer
- <https://www.drupal.org/project/coder>
 - Includes “Drupal” and “DrupalPractice” sniffs
- Detect deviations from Drupal Coding Standards

PAReview.sh

- [DrupalPractice](#) has found some issues with your code, but could be false positives.

```
FILE: /var/www/drupal-7-pareview/pareview_temp/Check/Cron/Running.php
```

```
-----  
FOUND 0 ERRORS AND 1 WARNING AFFECTING 1 LINE
```

```
-----  
64 | WARNING | Unused global variable $conf.
```

```
FILE: ...ar/www/drupal-7-pareview/pareview_temp/Check/Extensions/Duplicate.php
```

```
-----  
FOUND 0 ERRORS AND 1 WARNING AFFECTING 1 LINE
```

```
-----  
143 | WARNING | Unused variable $index.
```

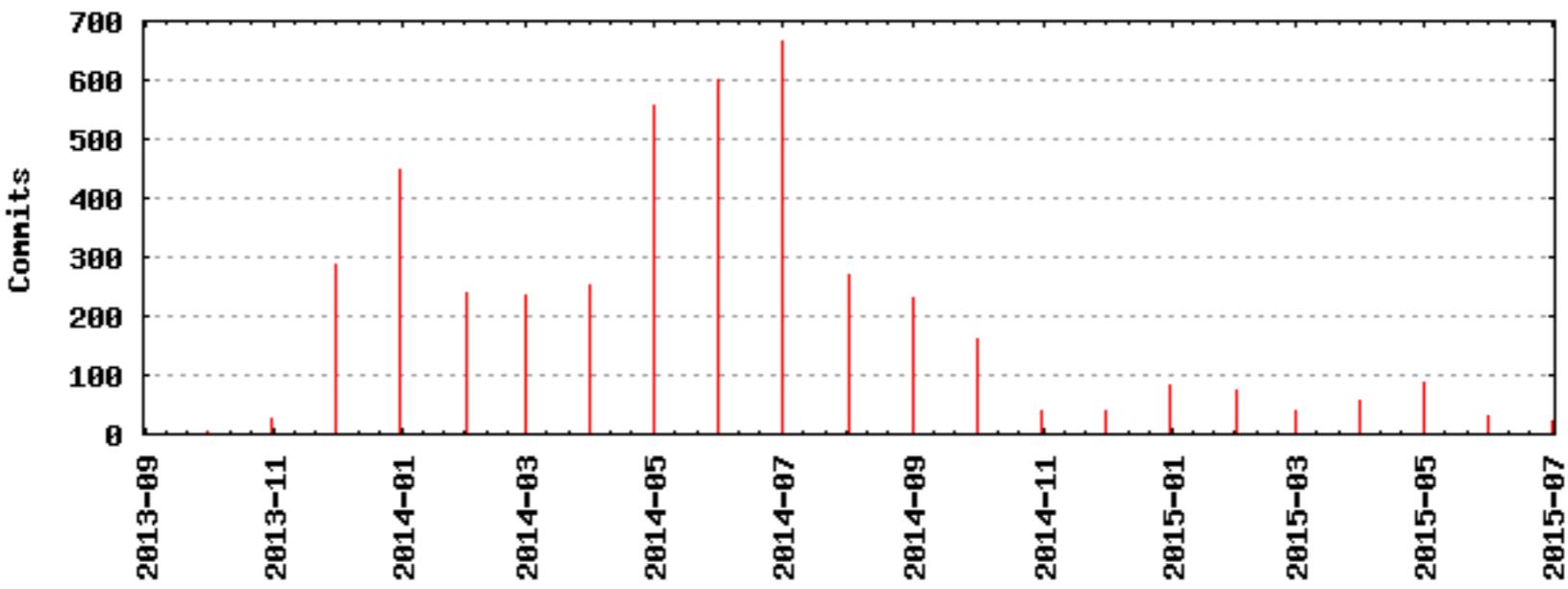
- <http://pareview.sh/>
- Automated reviews of drupal.org projects

PHP Tools

- PHP Copy/Paste Detector - <https://github.com/sebastianbergmann/phpcpd>
- PHP Mess Detector - <http://phpmd.org/>
 - Possible bugs, suboptimal or unused code, overcomplicated expressions
- PHP LOC - <https://github.com/sebastianbergmann/phploc>
 - Measures size and structure

Git Tools

Commits by year/month



- GitStats - <http://gitstats.sourceforge.net/>
 - statistics generator
- gitinspector - <https://code.google.com/p/gitinspector/>
 - statistical analysis tool

JavaScript Tools

- ESLint - <http://eslint.org/>
 - Pluggable linting utility for JavaScript and JSX
- JSCS - <http://jscs.info/>
 - JavaScript Code Style
- JSHint - <http://jshint.com/>
 - Community-driven tool to detect errors, potential problems

WebPageTest.org

[HOME](#)[**TEST RESULT**](#)[TEST HISTORY](#)[FORUMS](#)[DOCUMENTATION](#)[ABOUT](#)[Need help improving?](#)

Web Page Performance Test for



From: Dulles, VA - Chrome - Cable
7/22/2015, 1:20:09 PM

F	F	C	N/A	B	X
First Byte Time	Keep-alive Enabled	Compress Transfer	Compress Images	Cache static content	Effective use of CDN

[Summary](#)[Details](#)[Performance Review](#)[Content Breakdown](#)[Domains](#)[Screen Shot](#)

Tester: IE10501-192.168.105.101

[Re-run the test](#)[Raw page data](#) - [Raw object data](#)[Export HTTP Archive \(.har\)](#)[See in ShowSlow](#)[View Test Log](#)

	Load Time	First Byte	Start Render	Speed Index	DOM Elements	Document Complete			Fully Loaded			
						Time	Requests	Bytes In	Time	Requests	Bytes In	Cost
First View	3.811s	1.436s	2.405s	3446	698	3.811s	52	748 KB	4.487s	63	869 KB	\$---
Repeat View	2.438s	1.315s	1.996s	2814	698	2.438s	7	111 KB	2.713s	9	195 KB	

Waterfall

Screen Shot

Video



Google PageSpeed Insights

- <https://developers.google.com/speed/pagespeed/insights/>

The screenshot shows the Google PageSpeed Insights interface for a mobile device. At the top, there are two tabs: "Mobile" (selected) and "Desktop". Below them, the score is displayed as "39 / 100" in a red box, followed by the text "Suggestions Summary". A section titled "Should Fix:" lists a recommendation to "Eliminate render-blocking JavaScript and CSS in above-the-fold content" with a "Show how to fix" link. Another section titled "Leverage browser caching" provides information about setting expiry dates for static resources. A list of cacheable resources is shown at the bottom, including "http://csm2waycm-atl.netmng.com/cm/" and "http://imagec17.247realmedia.com/...keoverCompanionNetworkROS.jpg/1440617857".

Mobile Desktop

39 / 100 Suggestions Summary

! Should Fix:

Eliminate render-blocking JavaScript and CSS in above-the-fold content

▶ Show how to fix

Leverage browser caching

Setting an expiry date or a maximum age in the HTTP headers for static resources instructs the browser to load previously downloaded resources from local disk rather than over the network.

Leverage browser caching for the following cacheable resources:

http://csm2waycm-atl.netmng.com/cm/ (expiration not specified)

http://imagec17.247realmedia.com/...keoverCompanionNetworkROS.jpg/1440617857 (expiration not specified)

WAVE Web Accessibility Tool

- <http://wave.webaim.org/>
- Analyzes web pages for accessibility
- Actionable recommendations on how to fix problems

The screenshot shows the WAVE Web Accessibility Tool interface. At the top, there are three buttons: 'Styles' (highlighted in green), 'No Styles', and 'Contrast'. Below this is the 'Summary' section, which displays the following statistics:

- 1 Errors
- 13 Alerts
- 3 Features
- 10 Structural Elements
- 8 HTML5 and ARIA
- 1 Contrast Errors

On the left side, there is a vertical sidebar with five icons corresponding to the panels: 'DETAILS' (red lightning bolt), 'DOCUMENTATION' (blue info circle), 'OUTLINE' (document icon), 'AUDIT' (green clipboard), and 'OPTIONS' (grey info circle). The 'AUDIT' and 'OPTIONS' icons are partially visible at the bottom of the sidebar.



TOO MUCH INFORMATION

Effectively delivering an audit

Structure of a Report

- Overview
- Actionable recommendations
- Appendix
 - How to install & use tools
 - Raw results

GitBook for publishing reports

- <https://github.com/GitbookIO/gitbook>
- Book format and toolchain using Git and Markdown
- Command-line, uses Node.JS
- Outputs HTML, PDF, ebooks, and more
- Incredibly useful for large structured reports

The screenshot shows the Atom code editor interface. On the left is a tree view of the project structure:

- src
- .git
- _book
- appendix
- discovery
- node_modules
- recommendations
- src
- .gitignore
- book.json
- cover.jpg
- gitbook.md
- README.md
- SUMMARY.md

The main editor area has three tabs: README.md, SUMMARY.md (which is active), and SUMMARY.md Preview. The SUMMARY.md file contains the following content:

```
1 * [Discovery](discovery/README.md)
2   * [Requirements](discovery/requirements.md)
3   * [Monitoring and Privacy](discovery/monitoring_privacy.md)
4   * [Hosting](discovery/hosting/README.md)
5   * FIRTSITE.org
6     * [Development process](discovery/FIRTSITE/development.md)
7     * [Services](discovery/FIRTSITE/services.md)
8     * [Deployment process](discovery/FIRTSITE/deployment.md)
9     * [Code](discovery/FIRTSITE/code.md)
10  * SECONDSITE.org
11    * [Development process](discovery/SECONDSITE/development.md)
12    * [Services](discovery/SECONDSITE/services.md)
13    * [Deployment process](discovery/SECONDSITE/deployment.md)
14    * [Code](discovery/SECONDSITE/code.md)
15  * [Recommendations](recommendations/README.md)
16    * [FIRTSITE.org](recommendations/FIRTSITE.md)
17    * [SECONDSITE.org](recommendations/SECONDSITE.md)
18  * [Appendix](appendix/README.md)
19    * [Image Optimization](appendix/image_optimization.md)
20    * [Appspector](appendix/appspector.md)
21    * [Code](appendix/code.md)
22    * [Headers](appendix/headers.md)
23    * [Code Quality](appendix/code_quality/README.md)
```

The right panel shows the preview of the SUMMARY.md file, which is a hierarchical list of links:

- Discovery
 - Requirements
 - Monitoring and Privacy
 - Hosting
- FIRTSITE.org
 - Development process
 - Services
 - Deployment process
 - Code
- SECONDSITE.org
 - Development process
 - Services
 - Deployment process
 - Code
- Recommendations
 - FIRTSITE.org
 - SECONDSITE.org
- Appendix
 - Image Optimization

Editing GitBook structure with Atom

1. Discovery

1.1. Requirements

1.2. Monitoring and Privacy

1.3. Hosting

1.4. Other

1.4.1. Development process

1.4.2. Services

1.4.3. Deployment process

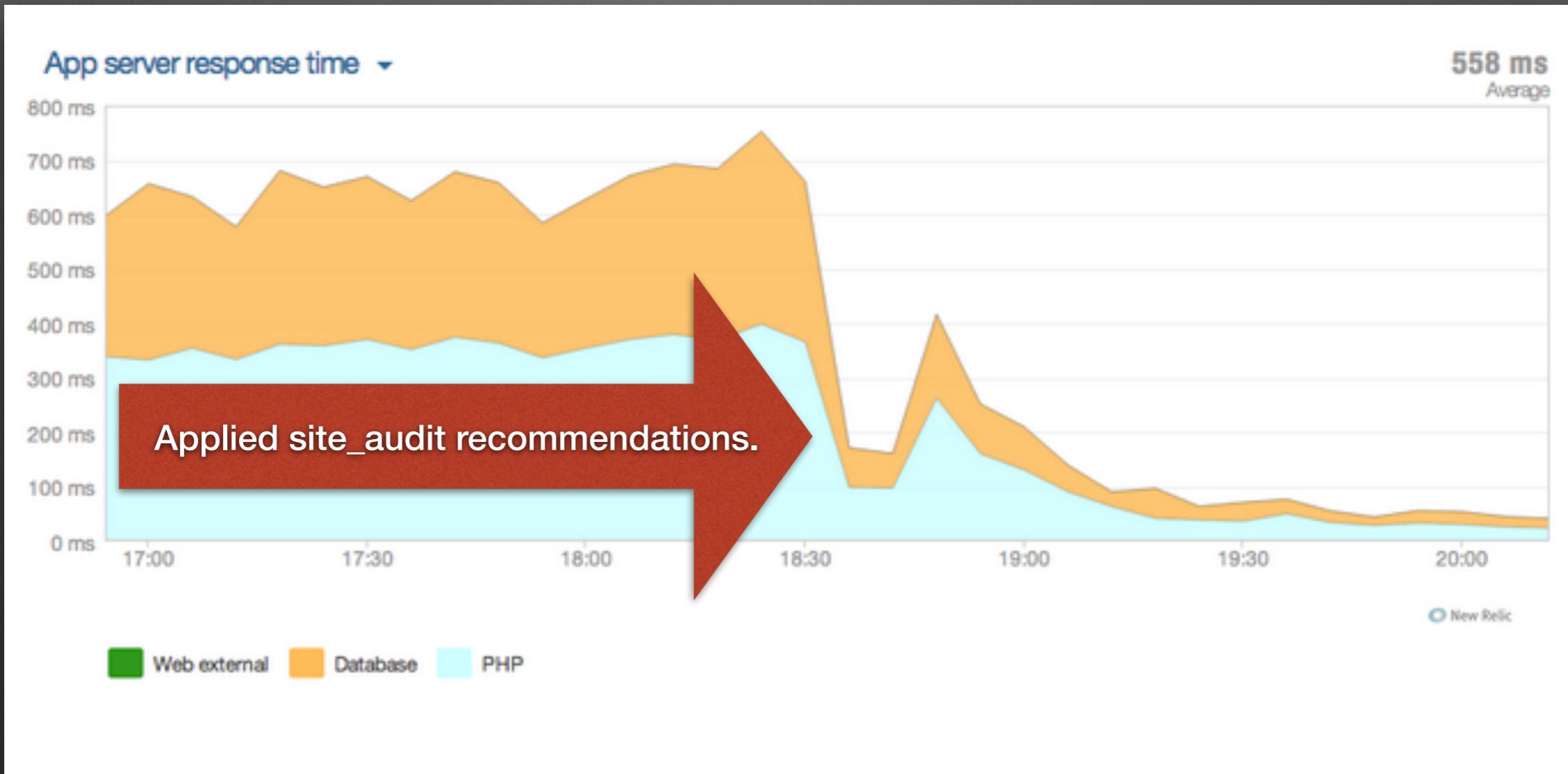
1.4.4. Code

Introduction

This project is an opportunity [REDACTED] to catch up and exceed with performance on the web. Other digital programs related to [REDACTED] will be looking at how this project is handled, so it's a trailblazing program that could be used as a guide and roadmap to performance improvement.

In the initial part of the project, Four Kitchens will audit the sites' web performance and implement a technical review of the current web infrastructure. After that, the vendor will provide recommendations for a high performance website redesign of the

GitBook HTML Format



Good configuration matters.

[@FluxSauce](https://github.com/fluxsauce) - github.com/fluxsauce - drupal.org/u/fluxsauce

Berkeley, CA
Oct 22 - 25
2015.badcamp.net



BADCAMP