



# SDCC – CMS Update

A New CMS for a New Decade: Content Management at  
SDCC

**BROOKHAVEN**  
NATIONAL LABORATORY



BROOKHAVEN SCIENCE ASSOCIATES

# Task at hand:

- Determine and select new content management system (CMS) that is easy to navigate for the content creator and has an appealing design for the user
- Restructure of previous SDCC sites utilizing new CMS
- Creation of content management theme to bring all sites under the SDCC under one uniform look for better user experience
- Automate deployment of CMS for quick setups
- Streamline update of security patches to minimize attacks of CMS

# Background

- Some original sites already implemented a CMS, a decision was made to explore alternatives based on look and security
- To streamline navigation the CMS would need to be capable of integrating a centralized SSO providing an additional layer of security while not hindering the user experience

The desktop view of the RACF WebDocs Portal features a wide header with a navigation menu containing links for Home, Documentation, Events, Members, News, Projects, RACF Electronic Logbook, and Tools. A search bar is located in the top right corner. The main content area includes a 'Welcome to the RACF WebDocs Portal' message, a 'Log in' form with fields for Login Name and Password, and a calendar for September 2020. A sidebar on the left provides 'Information' and 'Links' sections.

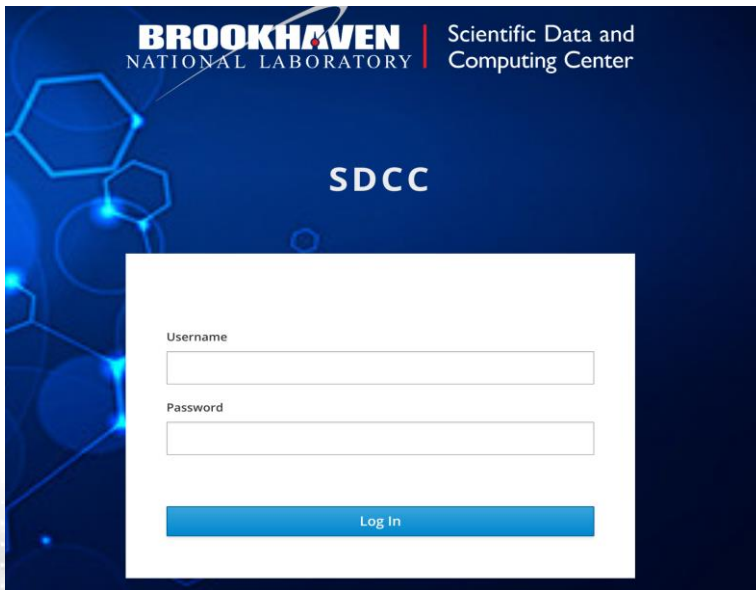
Current desktop web view

The mobile view of the RACF WebDocs Portal is a compact, single-column layout. It features a search bar at the top, a navigation menu with links for Home, Documentation, Events, Members, News, Projects, RACF Electronic Logbook, and Tools, and a 'Log in' button. The main content area includes a 'Welcome to the RACF WebDocs Portal' message and a 'Log in' form.

Current mobile view

# CMS Considerations:

- CMS needs compatibility with current Keycloak setup for BNL/SDCC users
- Larger project sites need to integrate federated login for multiple institutions
- CMS should allow users without web experience to create and edit pages easily
- Sites should be able to be easily backed up and transferred should the need arise



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**SDCC**

Username

Password

Log In

## Evaluated CMS' :

- Wordpress
- Joomla
- Drupal
- Plone
- Hugo
- Jekyll

# How they stack up

## Wordpress:

- Most popular CMS – ~35% of all sites run on WordPress
- Highly customizable
- Major release goes out every 4 to 5 months
- Large library of open source plugins and modules for customization
- SSO provided by third party, paid license
- Written in PHP7
- Easy to use interface for a non developer user

## Joomla:

- Third party open source plugins and modules for customization
- Written in PHP7
- SSO provided by third party, paid license
- Steep learning curve for a non developer

## Drupal:

- Best in security among reviewed CMS ([as of 2018 reporting](#))
- Large community of open source developers providing modules, plugins, themes
- SSO provided by open source community
- Written in PHP7
- Easy to use interface for content creation

# How they stack up (cont)

## **Plone:**

- Built in Python
- Version 5.2+ capable of using Python 2.7.14, 3.6, 3.7
- Large community of open source modules and plugins
- Lack of SSO integration with current Keycloak setup

## **Hugo:**

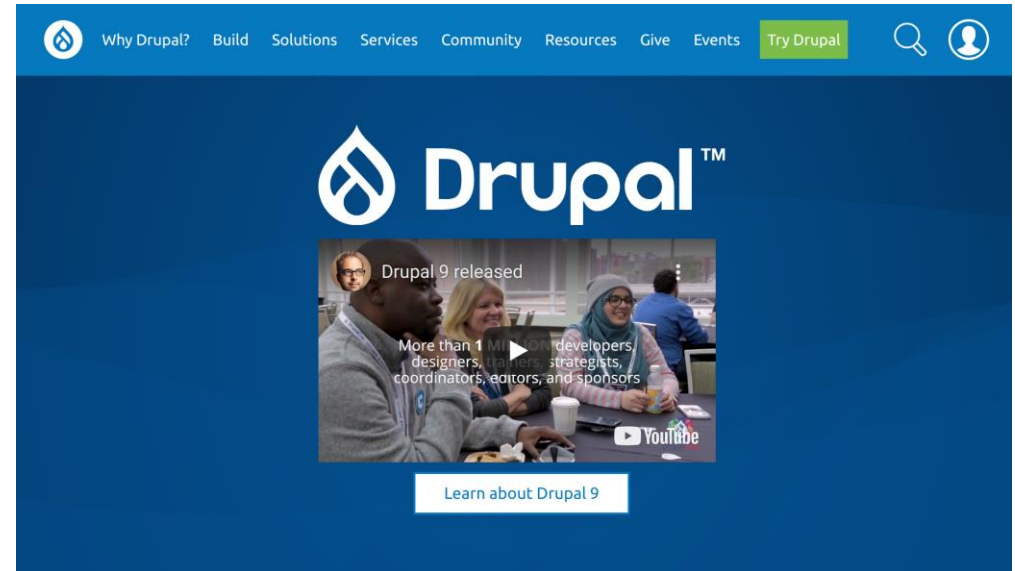
- Markdown based
- Utilizes GO programming language
- Most development will be on backend, no webui for user content creation
- Steep learning curve for a non developer

## **Jekyll:**

- Markdown based
- Built in Ruby using Gems
- Similar to Hugo no webui

# Drupal

- Quick deployment utilizing composer and prebuilt modules for pages, authentication, and themes
- Easily customizable from within the webui with further customization done by php development on backend
- Regularly updated with security patches with the ability to provide notifications via email to site administrators
- Updates are performed easily through composer with the added ability to keep modules at specific versions



Drupal for  
**Developers**  
*Download Drupal and  
build the open web*



Drupal for  
**Marketers**  
*In a world full of templates,  
be original*



Drupal for  
**Agencies**  
*Achieve your  
clients' ambition*

# Benefits of Drupal

**Roles** ☆

List Permissions Roles

Home » Administration » People » Roles

A role defines a group of users that have certain privileges. These privileges are defined on the [Permissions page](#). Here, you can define the names and the display sort order of the roles on your site. It is recommended to order roles from least permissive (for example, Anonymous user) to most permissive (for example, Administrator user). Users who are not logged in have the Anonymous user role. Users who are logged in have the Authenticated user role, plus any other roles granted to their user account.

[+ Add role](#)

[Show row weights](#)

NAME	OPERATIONS
✚ Anonymous user	<a href="#">Edit</a> ▾
✚ Authenticated user	<a href="#">Edit</a> ▾
✚ Atlas Authenticated	<a href="#">Edit</a> ▾
✚ Atlas Management	<a href="#">Edit</a> ▾
✚ Administrator	<a href="#">Edit</a> ▾

[Save](#)

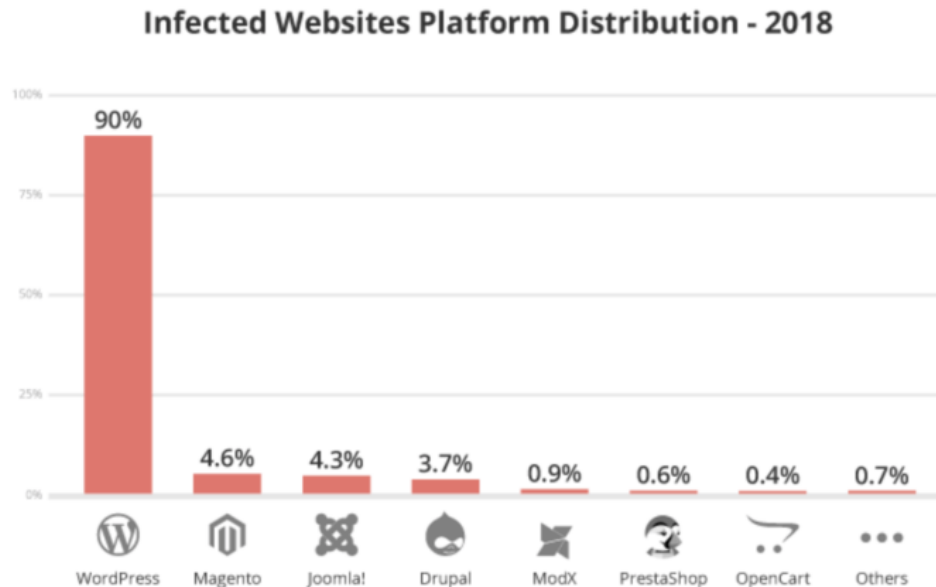
## Roles:

- From within Drupal administrators are able to provide specific elevated command usage to logged in contributors
- Ability to control page accessibility through a combination of role mapping and authentication
- Editorial workflow allowing site moderators to control page edits from contributors



# Security

- Drupal provides email notification regarding updates to vital security patches and can be configured to notify for any updates to modules or core as well
- As a popular CMS it is regularly updated to combat cyber attacks



<https://sucuri.net/reports/2018-hacked-website-report/>

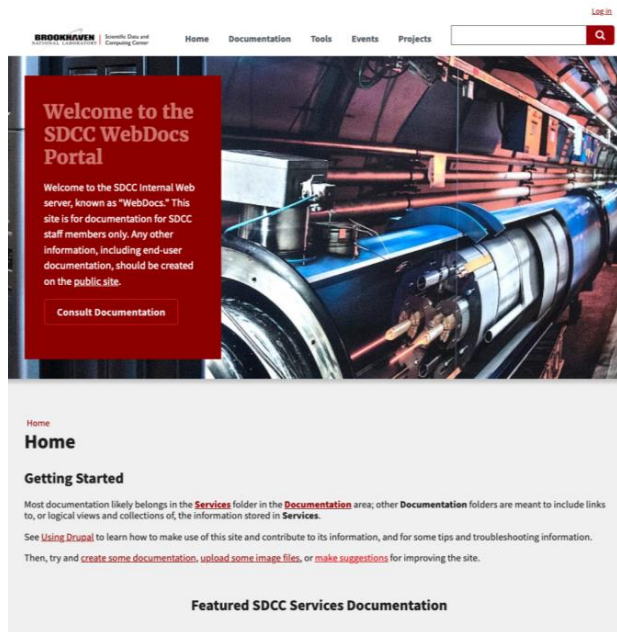
# Initial Site Built with Drupal

## SDCC WebDocs

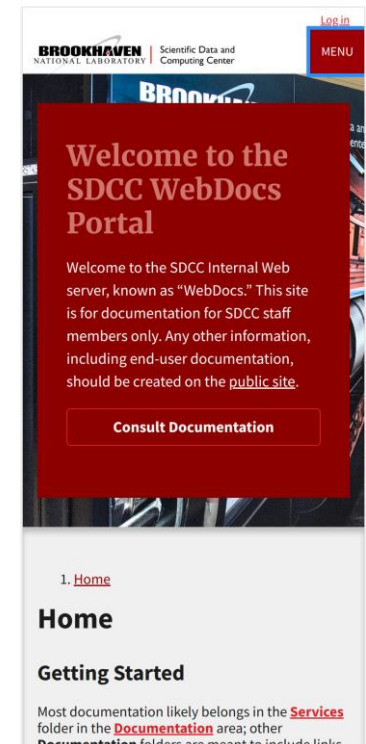
Internal documentation site available for staff of SDCC computer resources.

Key features:

- Authentication easily managed through usage of Keycloak Drupal module
- Updated responsive web theme allowing for modernization and accessibility on multiple platforms
- User friendly WebUI for content creation and moderation



Site as seen on desktop browser



Site as seen on mobile

# New vs Old Design

Log in

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MENU

## Welcome to the SDCC WebDocs Portal

Welcome to the SDCC Internal Web server, known as "WebDocs." This site is for documentation for SDCC staff members only. Any other information, including end-user documentation, should be created on the [public site](#).

[Consult Documentation](#)

1. [Home](#)

### Home

#### Getting Started

Most documentation likely belongs in the [Services](#) folder in the [Documentation](#) area; other [Documentation](#) folders are meant to include links to, or logical views and collections of, the information stored in [Services](#).

See [Using Drupal](#) to learn how to make use of this site and contribute to its information, and for some tips and troubleshooting information. Then, try and [create some documentation](#), [upload some image files](#), or [make suggestions](#) for improving the site.

Search Site  Search

only in current section

Home	Documentation	Events
Members	News	Projects
RACF Electronic Logbook	Tools	

You are here: [Home](#)

### Welcome to the RACF WebDocs Portal

by John S. De Stefano Jr. — last modified Dec 12, 2017 09:55 AM

Contributors: Shigeki Misawa

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An additional web hierarchy is provided for external, authenticated user content on the [external authenticated site](#).

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Information	Links
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Log in

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Home Documentation Tools Events Projects

Search

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#### Featured SDCC Services Documentation

### RACF WebDocs Portal

Home	Documentation	Events	Members	News	Projects	RACF Electronic Logbook
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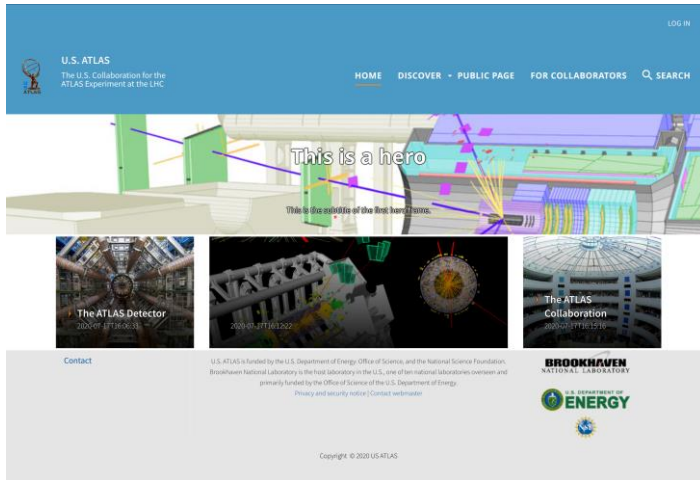
<p><b>Information</b></p> <p><b>About this web site and the RACF facility:</b></p> <ul style="list-style-type: none"> <li>Start with <a href="#">frequently asked questions</a> (please add your own questions to that list)</li> <li>View <a href="#">RACF Staff Contact Information</a> <ul style="list-style-type: none"> <li>Facility coverage lists:</li> </ul> </li> </ul>	<p><b>Links</b></p> <p><b>Links to other sites:</b></p> <ul style="list-style-type: none"> <li>Public RACF facility site</li> <li>Authenticated RACF facility site</li> <li>BNL</li> <li>BRAHMS</li> </ul>
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# Deployment

- SDCC deployment has been automated through Puppet configuration
- All sites have a uniform setup with the ability to provide specific customization requests from each project
- Sites are able to be backed up and migrated to new servers easily and quickly utilizing Drupal modules
- Security updates are provided individually for each site's specific configuration needs

# Customization

- SDCC custom deployment of USATLAS and sPHENIX sites



USATLAS Drupal instance



SPHENIX Drupal instance

Both sites were setup with the same deployment through puppet

# Questions?