

Ultimate Guide to Drupal 10

New functionalities, improved ease of use, and strong security built on Drupal's strong foundation.



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The Future of Drupal 10

Whether you're a longtime user or have yet to try it, this guide is meant to help you better understand Drupal and its latest version, Drupal 10. As the largest contributor to Drupal 10, Acquia is well-positioned to provide useful guidance for you and your team.

There are certainly many benefits to using Drupal as your content management system (CMS). But, as we take a closer look at what Drupal 10 has to offer, it's worth highlighting some reasons different stakeholders are drawn to it.

- Developers typically value
 Drupal's open source flexibility,
 stability, security, and active
 contributor community.
- Marketers often value the powerful marketing tools they have access to with Drupal.
- Business owners may view
 Drupal positively because their developers and marketers agree on it, but many appreciate how it can help their business become more agile, innovative, and competitive.

In fact, Drupal delivers a wide range of capabilities, features, and benefits that make building and maintaining almost any website easier.

But Drupal also makes it easy to deliver content to many other channels that are important for today's businesses.

Why Use Drupal?

Drupal Is Open Source

A huge part of what sets
Drupal apart is flexibility. Unlike
proprietary content management
systems, which constrain
your choices of capabilities
and features to those that are
available within a particular
vendor's ecosystem, Drupal
enables you to apply a best-ofbreed approach. This makes
it possible to choose the back
end, front end, and delivery
technologies that best meet your
unique individual requirements.

Drupal achieves this flexibility because it is an open source solution. Supported by an active community of 45,000+ contributors, rather than a single company or author, Drupal offers its users the creative freedom to innovate and solve problems — without the limitations of vendor lock-in.



Because it's open source, Drupal ensures that its users will have:

- Unlimited flexibility
- No vendor lock-in so you can take your code anywhere
- Access to rapid and ongoing communitydriven innovation

2. Drupal Features a Flexible Architecture for Modern App Development

The digital space has never been noisier or more crowded, and it's the details that matter.

Teams are challenged to develop and publish large volumes of content, as well as distinguish their business from competitors by maintaining a visually distinct brand identity.

Drupal's architecture gives developers more flexibility here, enabling them to control their own code – and data – so that they can express the unique qualities of their brand.

Drupal works for content management environments and sites that span the full range of possibilities:

- From traditional to headless
- From dynamic to static
- From small to large
- From simple to complex
- From web to mobile



A Closer Look at Features that Give **Developers More Flexibility**



Headless/Decoupled Support

Drupal ships with an implementation of the JSON:API specification, but GraphQL and other standards are also implemented in extensions. This allows developers to use Drupal as a central content store on a decoupled front end (mobile application, JavaScript framework, etc.).



Mobile Experience

Drupal is designed with mobile in mind, from the installer to the modules page. To support the wide range of internet-enabled devices that are available. Drupal incorporates responsive design into all of its functionality. Carefully crafted form elements provide targeted user interfaces on mobile devices for fields such as date/time, phone numbers, and email addresses.



Static Sites with Drupal

What's unique about Drupal is that it can scale from really complex interactive experiences down to static content sites. The popular Tome extension allows the use of Drupal as a static site generator with the full power of Drupal at the back end, while only the super-fast-to-serve static site content is pushed to production.





3. Drupal Offers a Marketer-Friendly CMS

Today's marketers need to keep up with their customers' everevolving preferences. To realize better campaign outcomes, they need to be able to act quickly. This means working to optimize digital experiences on the fly — without having to wait for developers to build and implement complex components.

Drupal empowers marketers to do exactly this. Drupal can work in tandem with solutions that make it possible to deliver intelligent, personalized experiences for users across a multitude of channels.

Drupal includes a plethora of SEO features, hundreds of martech integrations, visual website/landing page builders, live previews, reusable and composable content, multilingual capabilities, enterprise content workflows, rich page templates, and more.

The best part is that many of these capabilities can be implemented with little or no assistance from developers.

A Closer Look at Features that Streamline Work for Marketers



Layout Builder

The Layout Builder core module provides layout capabilities for content. Layout Builder is unique in offering a single, powerful visual design tool for the following three use cases:

- Layouts for templated content
- **Customization for templated** layouts
- **Custom pages**



Multilingual Capabilities

Drupal comes with built-in features to make any part of the system multilingual:

- The ability to install Drupal in 100 different languages from the get-go
- Translation for content items, such as nodes, taxonomy terms, menu items, and user profiles
- Configuration translation, such as making listings and forms multilingual



Content Workflow

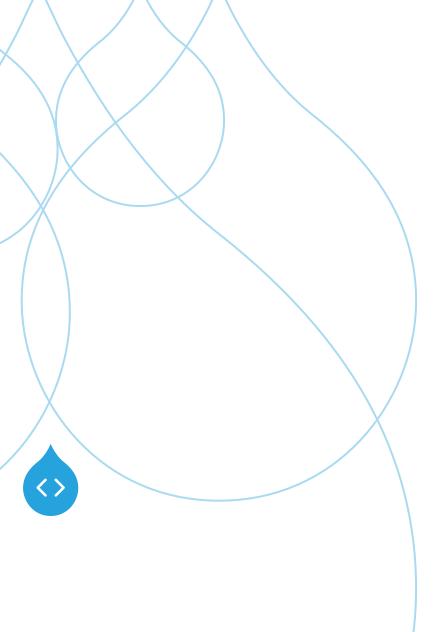
The Workflows module allows users to define multiple workflows, and show the content workflow states and transitions allowed between them. The Content Moderation module allows users to create content revisions that are not live yet, but have received updates since the last version.



Workspaces

A promising experimental feature still under development called Workspaces allows for staging and publishing multiple content changes (article text, sidebar blocks, menu entries, and so on) at once and previewing how they will look in their entirety. Users can even prepare site content around multiple "scenarios," such as election results or Oscar winners, and publish the appropriate version when the time comes.





4. Drupal ProvidesExtensive Integrations

Building on Drupal gives you complete freedom to customize your site and content so that it's exactly the way you want it. This includes integrating the modules and extensions that you want, regardless of who built them or what platform they run on.

In fact, more than 46,000 pre-built integrations and extensions are available for Drupal. But if none of these suit your needs perfectly, you can always build another one.

The broad array of integrations include components that enable:

- Form creation
- Personalization
- CRM
- Commerce
- Digital asset management (DAM)
- Marketing automation
- Cookie management (GDPR compliance)
- Social media marketing
- Analytics

In other words, alongside
Drupal, you can continue to use
the familiar marketing tools that
your team has already invested
in learning.

Drupal plays nice with your organization's existing email, analytics, and marketing automation solutions — as well as other components of your tech stack.

5. Drupal Is Scalable and Performant

Teams responsible for overseeing enterprise-scale web properties know how important scalability is. Your web applications need to deliver peak performance at the times when they attract the most traffic and attention. The demands on your technology architecture are greatest exactly when failure would do the most damage.

Fortunately, Drupal is known for its ability to deliver world-class performance and scalability. In fact, some of the most visited websites in the world run on Drupal, including those supporting events like the Olympics and the Super Bowl.

Drupal's performance-enhancing features include:

- Powerful caching with fine-grained cache clearing
- BigPipe for smoother page loading (The main content of a page populates quickly while auxiliary content, like sidebars, is still being generated)
- Horizontal scaling to dozens of servers
- Deep CDN integrations for global 24/7 availability
- Multi-region failover support for high availability
- Optimized HTML generation

- JS/CSS aggregation
- Support for lazy image loading
- Support for modern image formats

6. Drupal IsHighly Secure

With data breaches making headlines daily — and online attacks costing global businesses and consumers billions of dollars each year — today's consumers are more concerned about the privacy and security of their data than ever. Modern cyberthreats never sleep. Instead, they continue to evolve, always seeking the weakest link in an organization's digital ecosystem.

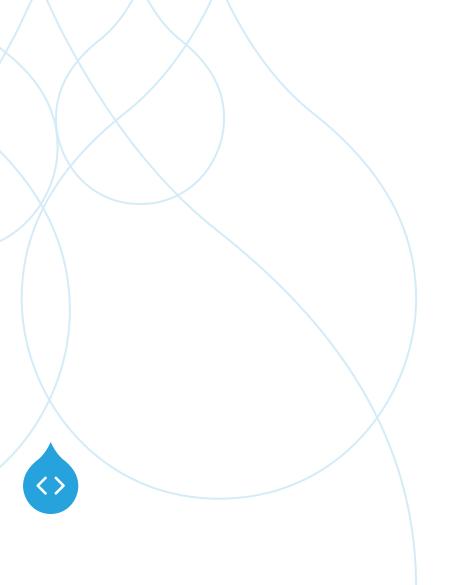
Drupal was designed to be highly secure. Trusted by governments, nonprofits, and many of the world's largest enterprises, the platform is home to numerous mission-critical websites. It's protected by a 30+ person internal security team, as well as the efforts of more than 45,000 contributors.

This means that bugs have nowhere to hide, making Drupal one of the most stable and secure CMSs that exists.





How Drupal 10 Expands on the Platform's Strengths



Drupal continues to build upon all of the successes that have made it the CMS of choice for ambitious site builders all around the world. It remains highly secure, powerfully configurable, flexible, and integration-rich, enabling brands to express their unique visual identity in ways that set them apart from competitors.

Upon its release on December 14, 2022, Drupal 10 includes all the best features and functionalities of Drupal 9, and upgrading to the new release is expected to be easy and straightforward. Essentially, Drupal 10 is a refined version of Drupal 9 that builds on

the strengths of the platform we have described above.

Retaining Security is Key

As the security needs for underlying platforms (like PHP) continue to evolve, the update will ensure that Drupal has no dependencies that will soon pass out of support or reach end of life.

To be clear, this does not mean that previous versions of Drupal are insecure. But as technology advances, new security issues emerge and the threat landscape changes. Part of Drupal's mission is to evolve the platform's underlying foundation so that developers and site administrators remain equipped to address security concerns moving forward.

To ensure a long-supported platform for Drupal 10, it requires PHP 8.1 and is built on Symfony 6.1. On the front end, support for Internet Explorer is entirely dropped, based on Microsoft themselves stopping support earlier in 2022.

Drupal 10: What's New

Olivero Is Now the **Default Front-End** Theme

In Drupal 10, Olivero replaces Bartik as the default front-end theme.

Bartik did not give Drupal a good look at the start anymore and will no longer be available as part of Drupal core. However, users who continue to rely on it can download it as an extension.

Olivero, which had been introduced and refined in previous versions of Drupal, offers flexibility and a clean, modern appearance. It is also highly accessible and easy to navigate — even for users who have visual impairments.

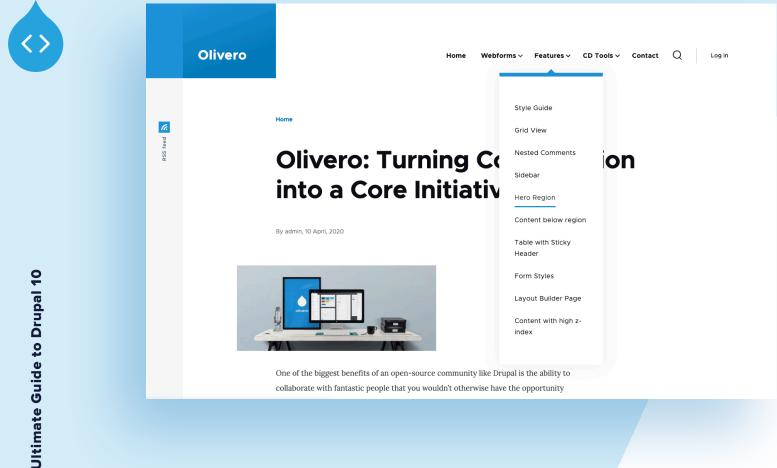
In addition, Olivero is WCAG AA-conformant and includes functionality that supports new features. It also supports multilevel menu creation.

New Starterkit Will Change How You **Create Themes**

Most development teams apply their own front-end look, either by adjusting a full featured theme or by custom-building

one based on a generic base theme. Starterkits will change the process of theme creation in Drupal 10. Starterkits will enable front-end developers to use a copy of a base theme as a starting point for building a new theme, rather than extending the base theme at runtime.

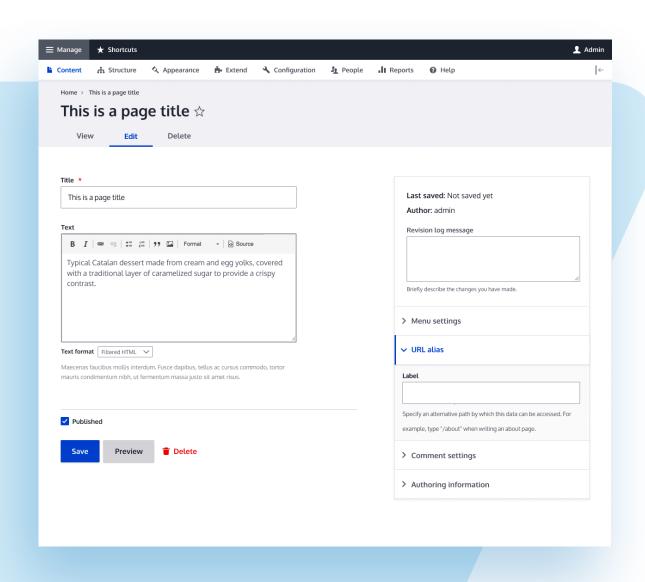
This makes it possible to update the default markup and CSS that are shipped as part of base themes, such as the Starterkit theme in Drupal core, while ensuring that site front ends remain stable. Runtime subtheming is still supported, but you should only use that method when the extended theme is fully in your control.





Improved Experience with a New Administration Theme: Claro

Claro is a new, clean, powerful, and highly accessible administration theme that's now available in Drupal core.



Claro offers a lighter and simpler administrative interface, offering admins an improved user experience while still giving them full control over Drupal's power and flexibility. Claro:

- Better supports mobile devices and experiences
- Improves accessibility
- Offers larger touch targets on-screen

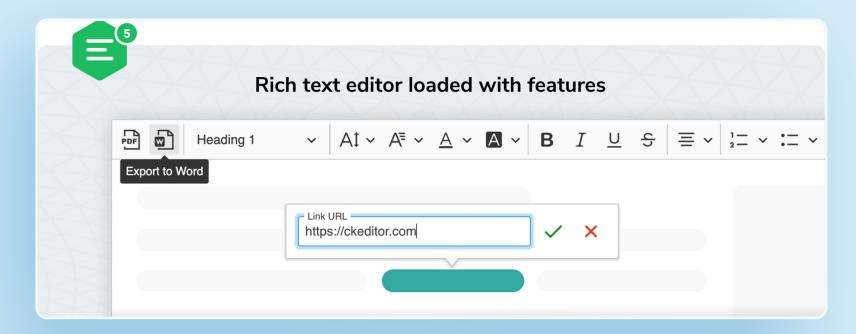
Because Claro was introduced as the new default administration theme in Drupal 9, many users will not notice a major change in their experience. However, those who used Seven, an administration theme available in previous versions, will no longer

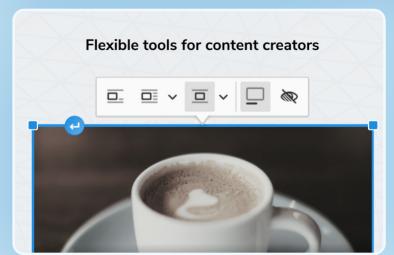
have it as an option in Drupal 10 core. They can still use Seven as a contributed extension.

A popular add-on theme, Gin, is also available for Drupal 10, though it's not part of Drupal core. Gin is built on top of the Claro theme, providing additional options for the admin interface. Gin includes customizations that are out of scope for Claro, but serves as a foundation for future experimentation.

JavaScript Modernization

In Drupal 10, modern JavaScript components were added to replace some uses of jQuery UI. This replacement process will continue with later versions of Drupal 10.







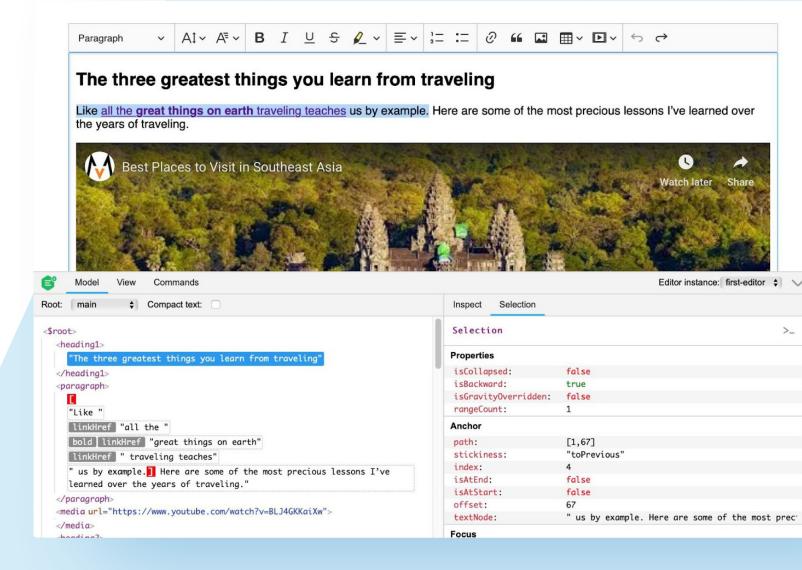
CKEditor 5 Will Replace CKEditor 4 to Deliver Better Authoring, Editing, and Support

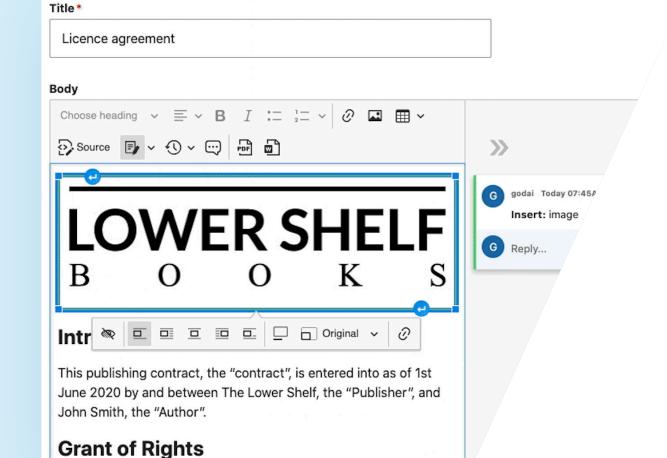
The inclusion of a new version of CKEditor within Drupal 10 enables a better authoring and editing experience and ensures that Drupal's built-in WYSIWYG text editor has ongoing support once CKEditor 4 reaches end of life at the end of 2023.

From version 4 to version 5,
CKEditor has been rewritten from
the ground up with a significantly
different architecture. CKEditor 5
makes it easier to import media
using a drag-and-drop process,
and it's simpler to add or adjust
alternate text on images. A
contextual pop-up box will
appear when you click on an
image, letting you add or edit
alt-text. CKEditor 5 is also easier
to navigate, and user dialogues
have been streamlined.

CKEditor 5's new and different architecture makes it a significant update to CKEditor 4. For instance, now all HTML elements you want to edit need explicit support in CKEditor 5.

These differences mean that developers who have created integrations or customizations with CKEditor 4 will need to address compatibility when managing the upgrade.





Because Drupal has a strong collaborative partnership with CKSource, the company behind CKEditor, the two groups have worked together to ensure strong integration between their solutions. That includes making the transition from version 4 to 5 easier for users. If you haven't created any custom integrations, you can use an automatic migration tool that will preserve all of the text you edited in CKEditor 4 in the new version.

However, if you do have custom integrations — such as customized buttons, you can use the <u>CKEditor 5 Dev Tools</u> project to help implement the same features.

The new modern editing architecture of CKEditor 5 makes it possible to add premium features, such as Google Docslike collaborative editing. This feature requires a CKSource subscription and is available with the CKEditor 5 Premium Features extension for Drupal.

Drupal 10 Offers Improved Core Code Performance

With the release of Drupal 10,
Drupal core is smaller and
leaner. Contributors have made
extensive efforts to clean up and
streamline the code in order to
emphasize Drupal's strengths
and core functionalities. There's
a sense of renewed focus on the
fundamental building blocks that
make Drupal what it is today.
The result is that, with Drupal 10:

- **♦** There is less code to maintain.
- There are fewer potential security problems to be concerned about.

In many instances, contributors have rewritten code to be more efficient. All code that was deprecated in Drupal 9 has now been entirely removed. This helps reduce confusion and redundancy in Drupal's APIs.

Features that haven't stood up well over time have also been removed in the interest of streamlining the platform as a whole. For instance, a news aggregator module was formerly built into Drupal core, making it possible to integrate data from various RSS feeds. This particular solution is no longer widely used, and better solutions for feed integration exist as contributed projects. So, it made perfect sense to remove the aggregator module from Drupal core.

In addition, a number of other modules remain available for use as contributed projects, but are no longer included in Drupal core. This was done in an effort to make Drupal core leaner and more manageable. Modules that were removed are those that are less used, that aren't part of an ecosystem, or that weren't built on in other modules.

Modules Moved	Themes Moved
Aggregator	Bartik
CKEditor 4	Classy
Color	Seven
HAL	Stable
Quickedit	
RDF	

Preparing for Drupal 10

When users made the transition from Drupal 7 to 8, the update involved such extensive changes that it often required a complete site rebuild. With the introduction of Drupal 8, that was changed and simplified, so upgrades to future versions are much easier.

Getting Started with Drupal 10 If You're New to Drupal

Installing and running Drupal is completely free. This includes the 40,000+ modules available to extend site functionality and the

2,500+ themes used to modify site appearance.

If you're running the site locally, you may also need to install server software, database software, and software to interpret the PHP programming language (in which Drupal is written).

You can also test-drive a newly installed Drupal site on your own in just a few minutes at SimplyTest.me. This site gives you access to a full Drupal installation to evaluate and customize. (Note that the evaluation site will expire after 12 hours.)

Itimate Guide to Drupal 10

For Drupal 9 Users

Upgrading to Drupal 10 from Drupal 9 should be relatively straightforward. Enable the Upgrade Status module on your Drupal 9 site to get an estimate of how extensive the needed changes are. This module can run either on the Drupal backend UI or on the command line interface with Drush. The module examines your environment to help you update your database server, PHP version, and more, to those compatible with Drupal

10. It identifies extensions that are not used on the site that likely can be removed. It scans your contributed modules for compatibility issues and uses of deprecated code. When compatible versions are available from Drupal.org, it will help you update them. When the updates are not yet available, it guides you to collaborate on issues on Drupal.org to make the projects compatible. For custom code, it will also provide guidance on where to use Drupal Rector in order to significantly speed up updating them.





```
@@ -73,9 +82,13 @@ class BulkFormTest extends ContactStorageTestBase {
    $this->drupalLogin($this->drupalCreateUser(['administer contact forms']));
    $this->drupalGet('test-contact-message-bulk-form');
    $elements = $this->xpath('//select[@id="edit-action"]//option');
    $this->assertIdentical(count($elements), 1, 'All contact message operations are found.');
    $this->drupalPostForm('test-contact-message-bulk-form', [], t('Apply to selected items'));
    $this->assertExt('No message selected.');
    $this->assertSame(count($elements), 1, 'All contact message operations are found.');
    $this->drupalGet('test-contact-message-bulk-form');
    $this->submitForm([], t('Apply to selected items'));
    // TODO: Drupal Rector Notice: Please delete the following comment after you've made any necessary changes.
    // Verify the assertion: pageTextContains() for HTML responses, responseContains() for non-HTML responses.
    // The passed text should be HTML decoded, exactly as a human sees it in the browser.
    $this->assertSession()->pageTextContains('No message selected.');
}
```

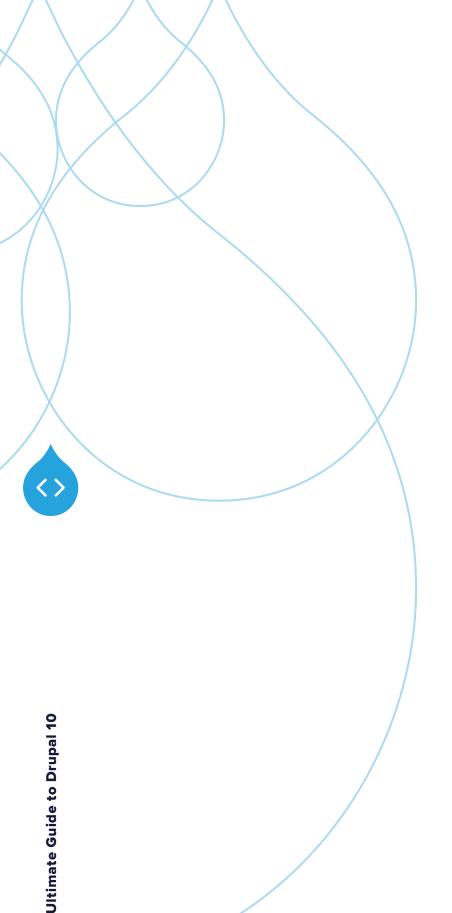
Drupal Rector will automatically generate fixes to help address compatibility issues. This is simpler and easier than starting the code updates manually. The most common deprecated APIs are covered by Drupal Rector, so it can give you a good head start. Any remaining issues identified by Upgrade Status will need to be fixed manually, but the module will direct you to documentation about the required changes.

Drupal Rector's ability to help developers identify and fix issues to ensure compatibility when moving from Drupal 9 to 10 has been significantly improved in comparison to what its ability was like for the Drupal 8 to 9 shift — even though it was already pretty good then.

If a contributed project is not yet Drupal 10 compatible, use the Lenient Composer plug-in

site. If uncommitted patches are available to said project, you can use cweagans/composer-patches
to apply patches where necessary and provide feedback to the patch authors and module maintainers about your experience with them. This will result in a site that still runs on Drupal 9 while its extensions are also compatible with Drupal 10. Then, all that's left to do is update Drupal core.

Since Drupal 9.5 has also been released, contributors will not build any more new features for Drupal 9. All future features will instead be made available for Drupal 10. These will include key features to be added to core in the future that are already available as contributed or addon extensions, such as Automatic Updates and Project Browser.



For Drupal 8 Users

Drupal 8 reached its end of life in November 2021. To upgrade to Drupal 10, you must first update your site to Drupal 9. Use the Upgrade Status Module to analyze your site. Nearly 9,000 contributed projects are available to run on Drupal 9, and most necessary custom code updates can be completed automatically using Drupal Rector.

For Drupal 7 Users

Drupal 7 will reach end of life in November 2023. Yes, this is after the release of Drupal 10. While Drupal 10 includes migration tools that make it possible to migrate directly from Drupal 7, it's likely that you are

relying on contributed projects that are available for Drupal 9. As explained above, those contributed projects are also gradually becoming Drupal 10 compatible. So even if you start on your Drupal upgrade process now with Drupal 9 in mind, the extensions installed will already be more or less Drupal 10 compatible as well. This will make your Drupal 9 to 10 transition much easier compared to those on Drupal 9 for a longer time.

Additionally, if you are using custom modules, <u>Drupal Module</u>

<u>Upgrader</u> can help convert Drupal 7 code to be compatible with Drupal 8/9/10. Other community add-ons in the <u>Migrate Tools</u> and <u>Migrate Plus</u> projects will help streamline the upgrade.

Acquia offers the Migrate

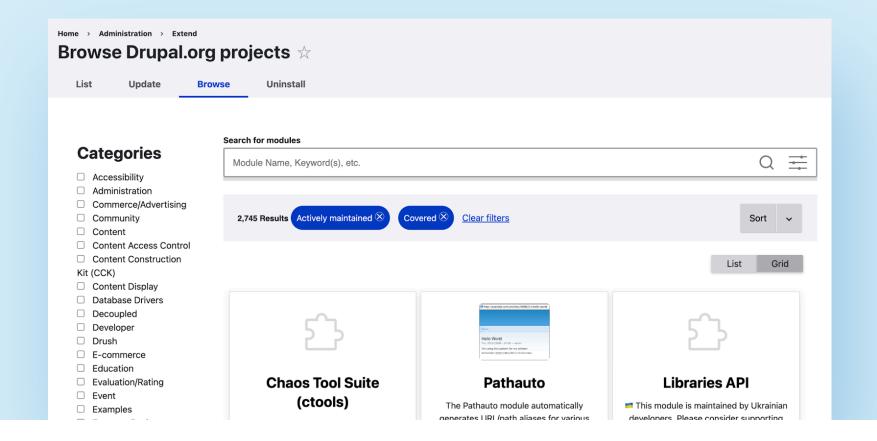
Accelerate product to

dramatically speed up the

migration process using an easyto-follow user interface.

But if for any reason you are not ready to upgrade and need longer-term support for your Drupal 7 website after community support ends in 2023, Acquia will provide extended support for Drupal 7 until at least 2025.

The Future of Drupal 10



As mentioned above, Drupal 10 was released on December 14, 2022. Currently, two subsequent minor releases are scheduled, with 10.1's release anticipated in June 2023 and 10.2 planned for release in December 2023.

Three key initiatives, built for eventual inclusion in Drupal core, are currently being worked on as

contributed extensions.

Automatic Updates applies updates to Drupal core in a separate, sandboxed copy of your site. This keeps the site up and running until the version is ready to be deployed. Automatic Updates can detect and report problems at every stage of the update process. The module automatically detects database

changes in an incoming update and helps you run them during the process. It currently supports patch-level updates but minor version updates are also implemented in an experimental submodule. The main module is currently stable as a contributed extension and will likely be added to Drupal 10 core as an experimental module.

Project Browser makes it easy for site builders to find modules and themes. Once a project is selected, it is installed with Automatic Updates's Package Manager component. The browser lives inside the Drupal site itself on a new Browse tab under Extend. This means you don't need to leave your site in order to look for projects.

Recipes are meant to make it easier for site builders to create the functionalities they need from their web applications. In the past, distributions have offered all the features and functions needed to build a specific type of site, made available within a single download package containing Drupal core, contributed modules, themes, and predefined configurations. The goal was to make it possible to set up a complex, use-specific site quickly, in fewer steps than it would take if you were installing and configuring its elements individually.

However, distributions are difficult to keep updated, can't easily be removed, and can't be added once you have started your project. Plus, they can't be mixed and matched with other sets of functionalities.

In Drupal 10, the concept of recipes will be introduced, possibly replacing distributions as well. Recipes will make it possible to combine and preconfigure Drupal features. Unlike distributions, a recipe can be installed at any point during a Drupal application's lifecycle. Though recipes are declarative rather than functional, they'll be able to harness dependent modules to build functionalities.

And they'll be able to build upon other recipes to create Recipe Kits.

While not an official initiative, there is also a renewed excitement around front-end improvements with the removal of support for Internet Explorer, so keep your eyes open for exciting news there too.

When Will Drupal 11 Be Released?

No set release dates for Drupal 11 have been scheduled yet, but it most likely will not be released before 2024.

The planned strategy for Drupal 11 is to double down on composability, which will help accelerate innovation in the project's contributed modules repository. More core extensions will be removed that don't contribute to the core strengths of the ecosystem. Instead Project Browser will be emphasized to make it easier for site builders to find and take advantage of a lot more prebuilt modules. It will also be possible to install and configure groups of prebuilt modules together, using Recipes. And the Automated Updates Initiative will continue to make updating Drupal easier than ever.

Ready to Try Drupal 10?

Learn more about how Acquia can support your move to Drupal 10.

Explore Drupal 10

To stay up-to-date on Drupal, you can also check out the following resources:

- https://dev.acquia.com/drupal10/deprecation_status/projects
- https://twitter.com/drupal
- https://twitter.com/dropismoving
- drupal.org/about/core

WHEREOWARE

About Whereoware

Whereoware is an award-winning, full-service digital experience agency and Acquia Partner, with development, digital strategy, design, UX, SEO, marketing, and PPC/social advertising teams in-house.

We'll design, build, optimize, and personalize your website, maximize Al tools, and integrate your earned/paid marketing strategy to achieve customer acquisition, retention, and maximization goals. We've launched 200+ websites on Acquia and alternative platforms and integrated with CRMs like Salesforce, marketing automation platforms, Al/ML solutions, self-service portals, Bl/analytics tools, CDPs, social/user generated content, and mobile apps.

The more complicated the better - we turn complex website activations into easy and impactful customer experiences.

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ACQUIC

About Acquia

Acquia empowers the world's most ambitious brands to create digital customer experiences that matter.

With open source Drupal at its core, the Acquia Digital Experience Platform (DXP) enables marketers, developers, and IT operations teams at thousands of global organizations to rapidly compose and deploy digital products and services that engage customers, enhance conversions, and help businesses stand out.







