**Setup Drupal 9 On Local System**

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**QUICKSTART**

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**Prerequisites:**

**- PHP 7.3.0 (or greater) (https://php.net).**

**In the instructions below, replace the version x.y.z with the specific version**

**you wish to download. Example: 8.6.0.zip. You can find the latest stable version**

**at https://www.drupal.org/project/drupal.**

**Download and extract the Drupal package:**

**- curl -sS https://ftp.drupal.org/files/projects/drupal-x.y.z.zip --output drupal-x.y.z.zip**

**- unzip drupal-x.y.z.zip**

**- cd /path/to/drupal-x.y.z**

**- php core/scripts/drupal quick-start**

**Wait… installation can take a minute or two. A successful installation will**

**result in opening the new site in your browser.**

**Run the following command for a list of available options that you may need to**

**configure quick-start:**

**- php core/scripts/drupal quick-start --help**

**Follow the instructions in the REINSTALL section below to start over.**

**NOTE: This quick start solution uses PHP's built-in web server and is not**

**intended for production use. Read more about how to run Drupal in a production**

**environment below.**

**REQUIREMENTS AND NOTES**

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**Drupal requires:**

**- A web server with PHP support, for example:**

**- Apache 2.4.7 (or greater) (http://httpd.apache.org/).**

**- Nginx 1.1 (or greater) (http://nginx.com/).**

**- PHP 7.3.0 (or greater) (http://php.net/). For better security support it is**

**recommended to update to at least 7.3.13.**

**- One of the following databases:**

**- MySQL 5.7.8 (or greater) (http://www.mysql.com/).**

**- MariaDB 10.3.7 (or greater) (https://mariadb.org/). MariaDB is a fully**

**compatible drop-in replacement for MySQL.**

**- Percona Server 5.7.8 (or greater) (http://www.percona.com/). Percona**

**Server is a backwards-compatible replacement for MySQL.**

**- PostgreSQL 10 (or greater) (http://www.postgresql.org/).**

**- SQLite 3.26 (or greater) (http://www.sqlite.org/).**

**For more detailed information about Drupal requirements, including a list of**

**PHP extensions and configurations that are required, see "System requirements"**

**(https://www.drupal.org/requirements) in the Drupal.org online documentation.**

**For detailed information on how to configure a test server environment using a**

**variety of operating systems and web servers, see "Local server setup"**

**(https://www.drupal.org/node/157602) in the Drupal.org online documentation.**

**Note that all directories mentioned in this document are always relative to the**

**directory of your Drupal installation, and commands are meant to be run from**

**this directory (except for the initial commands that create that directory).**

**OPTIONAL SERVER REQUIREMENTS**

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**- If you want to use Drupal's "Clean URLs" feature on an Apache web server, you**

**will need the mod\_rewrite module and the ability to use local .htaccess**

**files. For Clean URLs support on IIS, see "Clean URLs with IIS"**

**(https://www.drupal.org/node/3854) in the Drupal.org online documentation.**

**- If you plan to use XML-based services such as RSS aggregation, you will need**

**PHP's XML extension. This extension is enabled by default on most PHP**

**installations.**

**- To serve gzip compressed CSS and JS files on an Apache web server, you will**

**need the mod\_headers module and the ability to use local .htaccess files.**

**- Some Drupal functionality (e.g., checking whether Drupal and contributed**

**modules need updates, RSS aggregation, etc.) require that the web server be**

**able to go out to the web and download information. If you want to use this**

**functionality, you need to verify that your hosting provider or server**

**configuration allows the web server to initiate outbound connections. Most web**

**hosting setups allow this.**

**INSTALLATION**

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**1. Download and extract Drupal.**

**You can obtain the latest Drupal release from https://www.drupal.org -- the**

**files are available in .tar.gz and .zip formats and can be extracted using**

**most compression tools.**

**To download and extract the files, on a typical Unix/Linux command line, use**

**the following commands (assuming you want version x.y.z of Drupal in .tar.gz**

**format):**

**wget https://www.drupal.org/files/projects/drupal-x.y.z.tar.gz**

**tar -zxvf drupal-x.y.z.tar.gz**

**This will create a new directory drupal-x.y.z/ containing all Drupal files**

**and directories. Then, to move the contents of that directory into a**

**directory within your web server's document root or your public HTML**

**directory, continue with this command:**

**mv drupal-x.y.z/\* drupal-x.y.z/.htaccess drupal-x.y.z/.csslintrc drupal-x.y.z/.editorconfig drupal-x.y.z/.eslintignore drupal-x.y.z/.eslintrc.json drupal-x.y.z/.gitattributes /path/to/your/installation**

**You can also download the latest version of Drupal using Git on the command**

**line and set up a repository by following the instructions at**

**https://www.drupal.org/project/drupal/git-instructions for "Setting up**

**repository for the first time".**

**Once you have downloaded Drupal successfully, you may install Composer**

**globally using the instructions at**

**https://getcomposer.org/doc/00-intro.md#globally**

**With Composer installed, run the following command from the Drupal web root:**

**composer install**

**2. Create the Drupal database.**

**Because Drupal stores all site information in a database, the Drupal**

**installer will attempt to create this database for you. If you create the**

**database manually, you must grant Drupal certain database privileges (such as**

**the ability to create tables). For details, consult INSTALL.mysql.txt,**

**INSTALL.pgsql.txt, or INSTALL.sqlite.txt. You may also need to consult your**

**web hosting provider for instructions specific to your web host.**

**Take note of the username, password, database name, and hostname as you**

**create the database. You will enter this information during the install.**

**3. Run the install script.**

**To run the install script, point your browser to the base URL of your**

**website (e.g., http://www.example.com).**

**You will be guided through several screens to set up the database, add the**

**site maintenance account (the first user, also known as user/1), and provide**

**basic web site settings.**

**During installation, several files and directories need to be created, which**

**the install script will try to do automatically. However, on some hosting**

**environments, manual steps are required, and the install script will tell**

**you that it cannot proceed until you fix certain issues. This is normal and**

**does not indicate a problem with your server.**

**The most common steps you may need to perform are:**

**a. Missing files directory.**

**The install script will attempt to create a public file storage directory**

**in the default location at sites/default/files (the location of the files**

**directory may be changed after Drupal is installed).**

**If auto-creation fails, you can create the directory yourself. (If you are**

**creating a multisite installation, substitute the correct sites directory**

**for sites/default; see the Multisite Configuration section of this file,**

**below.) Sample commands from a Unix/Linux command line:**

**mkdir sites/default/files**

**chmod a+w sites/default/files**

**Alternatively, you can make the install script work by changing**

**permissions on the sites/default directory. The web server can then**

**create the files directory within it for you.**

**For example, on a Unix/Linux command line, you can grant everyone**

**(including the web server) permission to write to the sites/default**

**directory with this command:**

**chmod a+w sites/default**

**Then re-run install.php (e.g. by clicking "try again" at the bottom of**

**the Requirements problem page. Once the files directory is created, you**

**will need to grant everyone (including the web server) permission to**

**write to it with this command:**

**chmod a+w sites/default/files**

**Be sure to set the permissions for the default directory back after the**

**installation is finished! (Leave the files directory writable.)**

**Sample command:**

**chmod go-w sites/default**

**b. Missing settings file.**

**Drupal will try to automatically create a settings.php configuration file,**

**which is normally in the directory sites/default (to avoid problems when**

**upgrading, Drupal is not packaged with this file). If auto-creation fails,**

**you will need to create this file yourself, using the file**

**sites/default/default.settings.php as a template.**

**For example, on a Unix/Linux command line, you can make a copy of the**

**default.settings.php file with the command:**

**cp sites/default/default.settings.php sites/default/settings.php**

**Next, grant write privileges to the file to everyone (including the web**

**server) with the command:**

**chmod a+w sites/default/settings.php**

**Be sure to set the permissions back after the installation is finished!**

**Sample command:**

**chmod go-w sites/default/settings.php**

**c. Write permissions after install.**

**The install script will attempt to write-protect the settings.php file and**

**the sites/default directory after saving your configuration. If this**

**fails, you will be notified, and you can do it manually. Sample commands**

**from a Unix/Linux command line:**

**chmod go-w sites/default/settings.php**

**chmod go-w sites/default**

**4. Verify that the site is working.**

**When the install script finishes, you will be logged in with the site**

**maintenance account on a "Welcome" page. If the default Drupal theme is not**

**displaying properly and links on the page result in "Page Not Found" errors,**

**you may be experiencing problems with clean URLs. Visit**

**https://www.drupal.org/docs/8/clean-urls-in-drupal-8 to troubleshoot.**

**5. Change file system storage settings (optional).**

**The files directory created in step 3 is the default file system path used to**

**store all uploaded files, as well as some temporary files created by**

**Drupal. After installation, you can modify the file system path to store**

**uploaded files in a different location.**

**It is not necessary to modify this path, but you may wish to change it if:**

**- Your site runs multiple Drupal installations from a single codebase (modify**

**the file system path of each installation to a different directory so that**

**uploads do not overlap between installations).**

**- Your site runs on a number of web servers behind a load balancer or reverse**

**proxy (modify the file system path on each server to point to a shared file**

**repository).**

**- You want to restrict access to uploaded files.**

**To modify the file system path:**

**a. Ensure that the new location for the path exists and is writable by the**

**web server. For example, to create a new directory named uploads and grant**

**write permissions, use the following commands on a Unix/Linux command**

**line:**

**mkdir uploads**

**chmod a+w uploads**

**b. Open your settings.php in a plain-text editor, and uncomment (remove the #**

**at the start of line) this line:**

**# $settings['file\_public\_path'] = 'sites/default/files';**

**Enter the desired path and save the file.**

**If you want to use private file storage, you need to uncomment (remove**

**the # at the start of line) the following line in settings.php:**

**# $settings['file\_private\_path'] = '';**

**Enter the path for private files and save the file.**

**Changing the file system path after files have been uploaded may cause**

**unexpected problems on an existing site. If you modify the file system path**

**on an existing site, remember to copy all files from the original location**

**to the new location.**

**6. Revoke documentation file permissions (optional).**

**Some administrators suggest making the documentation files, especially**

**CHANGELOG.txt, non-readable so that the exact version of Drupal you are**

**running is slightly more difficult to determine. If you wish to implement**

**this optional security measure, from a Unix/Linux command line you can use**

**the following command:**

**chmod a-r core/CHANGELOG.txt**

**Note that the example only affects CHANGELOG.txt. To completely hide all**

**documentation files from public view, repeat this command for each of the**

**Drupal documentation files in the installation directory, substituting the**

**name of each file for CHANGELOG.txt in the example.**

**For more information on setting file permissions, see "Modifying Linux,**

**Unix, and Mac file permissions" (https://www.drupal.org/node/202483) or**

**"Modifying Windows file permissions" (https://www.drupal.org/node/202491) in**

**the Drupal.org online documentation.**

**7. Set up independent "cron" maintenance jobs.**

**Many Drupal modules have tasks that must be run periodically, including the**

**Search module (building and updating the index used for keyword searching),**

**the Aggregator module (retrieving feeds from other sites), and the System**

**module (performing routine maintenance and pruning of database tables). These**

**tasks are known as "cron maintenance tasks", named after the Unix/Linux**

**"cron" utility.**

**When you install Drupal, its built-in cron feature is enabled, which**

**automatically runs the cron tasks periodically, triggered by people visiting**

**pages of your site. You can configure the built-in cron feature by navigating**

**to Administration > Configuration > System > Cron.**

**It is also possible to run the cron tasks independent of site visits; this is**

**recommended for most sites. To do this, you will need to set up an automated**

**process to visit the page /cron on your site, which executes the cron**

**tasks.**

**The URL of the cron page requires a "cron key" to protect against**

**unauthorized access. Your site's cron key is automatically generated during**

**installation and is specific to your site. The full URL of the page, with the**

**cron key, is available in the "Cron maintenance tasks" section of the Status**

**report page at Administration > Reports > Status report.**

**As an example of how to set up this automated process, you can use the**

**crontab utility on Unix/Linux systems. The following crontab line uses the**

**wget command to visit the cron page, and runs each hour, on the hour:**

**0 \* \* \* \* wget -O - -q -t 1 http://example.com/cron/YOURKEY**

**Replace the text "http://example.com/cron/YOURKEY" in the example with the**

**full URL displayed under "Cron maintenance tasks" on the "Status report"**

**page.**

**More information about cron maintenance tasks is available at**

**https://www.drupal.org/cron, and sample cron shell scripts can be found in**

**the core/scripts/ directory. (Note that these scripts must be customized like**

**the above example, to add your site-specific cron key and domain name.)**

**REINSTALL**

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**Drupal can be reinstalled without downloading and extracting the Drupal release.**

**1. Drop all the tables in your database.**

**2. Remove everything in sites/default/files.**

**3. Remove sites/default/settings.php.**

**4. Follow the Installation Instructions above starting from Step 3 (Run the**

**install script).**

**BUILDING AND CUSTOMIZING YOUR SITE**

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**A new installation of Drupal defaults to a very basic configuration. To extend**

**your site, you use "modules" and "themes". A module is a plugin that adds**

**functionality to Drupal, while a theme changes the look of your site. The core**

**of Drupal provides several optional modules and themes, and you can download**

**more at https://www.drupal.org/project/project\_module and**

**https://www.drupal.org/project/project\_theme**

**Do not mix downloaded or custom modules and themes with Drupal's core modules**

**and themes. Drupal's modules and themes are located in the /core/modules and**

**/core/themes directories, while the modules and themes you add to Drupal are**

**normally placed in the /modules and /themes directories. If you run a multisite**

**installation, you can also place modules and themes in the site-specific**

**directories -- see the Multisite Configuration section, below.**

**Never edit Drupal's core modules and themes; instead, use the hooks available in**

**the Drupal API. To modify the behavior of Drupal, develop a module as described**

**at https://www.drupal.org/developing/modules. To modify the look of Drupal,**

**create a subtheme as described at https://www.drupal.org/node/2165673, or a**

**completely new theme as described at https://www.drupal.org/docs/8/theming**

**MULTISITE CONFIGURATION**

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**A single Drupal installation can host several Drupal-powered sites, each with**

**its own individual configuration.**

**For this to work you need the file sites/sites.php to exist. Make a copy of**

**the example.sites.php file:**

**$ cp sites/example.sites.php sites/sites.php**

**Additional site configurations are created in subdirectories within the 'sites'**

**directory. Each subdirectory must have a 'settings.php' file, which specifies**

**the configuration settings. The easiest way to create additional sites is to**

**copy file 'default.settings.php' from the 'sites/default' directory into the**

**new site directory with file name 'settings.php' and modify as appropriate.**

**The new directory name is constructed from the site's URL. The configuration**

**for www.example.com could be in 'sites/example.com/settings.php' (note that**

**'www.' should be omitted if users can access your site at http://example.com/).**

**$ cp sites/default/default.settings.php sites/example.com/settings.php**

**Sites do not have to have a different domain. You can also use subdomains and**

**subdirectories for Drupal sites. For example, example.com, sub.example.com, and**

**sub.example.com/site3 can all be defined as independent Drupal sites. The setup**

**for a configuration such as this would look like the following:**

**sites/default/settings.php**

**sites/example.com/settings.php**

**sites/sub.example.com/settings.php**

**sites/sub.example.com.site3/settings.php**

**When searching for a site configuration (for example www.sub.example.com/site3),**

**Drupal will search for configuration files in the following order, using the**

**first configuration it finds:**

**sites/www.sub.example.com.site3/settings.php**

**sites/sub.example.com.site3/settings.php**

**sites/example.com.site3/settings.php**

**sites/www.sub.example.com/settings.php**

**sites/sub.example.com/settings.php**

**sites/example.com/settings.php**

**sites/default/settings.php**

**If you are installing on a non-standard port, the port number is treated as the**

**deepest subdomain. For example: http://www.example.com:8080/ could be loaded**

**from sites/8080.www.example.com/. The port number will be removed according to**

**the pattern above if no port-specific configuration is found, just like a real**

**subdomain.**

**Each site configuration can have its own site-specific modules and themes in**

**addition to those installed in the standard 'modules' and 'themes' directories.**

**To use site-specific modules or themes, simply create a 'modules' or 'themes'**

**directory within the site configuration directory. For example, if**

**sub.example.com has a custom theme and a custom module that should not be**

**accessible to other sites, the setup would look like this:**

**sites/sub.example.com/**

**settings.php**

**themes/custom\_theme**

**modules/custom\_module**

**For more information about multiple virtual hosts or the configuration**

**settings, consult https://www.drupal.org/docs/8/multisite**

**For more information on configuring Drupal's file system path in a multisite**

**configuration, see step 6 above.**

**MULTILINGUAL CONFIGURATION**

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**By default, Drupal is installed in one language, and further languages may be**

**installed later.**

**For detailed instructions, visit**

**https://www.drupal.org/docs/8/multilingual**