How to Install Wiki.js on CentOS 7

Wiki.js is a modern and powerful OpenSource wiki app based on Node.js, Git, and Markdown. Wiki.js runs on the flamingly fast Node.js engine and is optimized to conserve CPU resources. Some of the Wiki.js features worth mentioning are:

- Markdown editing, backed by Git
- Lightweight, yet extremely powerful
- Beautifully designed for the modern web
- Integrated Access Control
- Intuitive Assets Management
- Built-in search engine

In this tutorial, we will walk you through the Wiki.js version 1 installation process on a CentOS 7 operating system by using NGINX as a reverse proxy server, MongoDB as a database server, PM2 as a process manager and optionally you can secure transport layer by using acme.sh client and Let's Encrypt certificate authority to add SSL support.

Requirements

Requirements to run Wiki.js are the following:

- Node.js 6.11.1 to 10.x is required.
- MongoDB version 3.2 or later.
- Git version 2.7.4 or later.
- Web Server software such as NGINX, Apache, Caddy, H2O...
- An empty Git repository (optional).
- Minimum of 512MB RAM. 1GB of RAM recommended.
- About 300MB of disk space.
- Domain name with A/AAAA DNS records set up.

Prerequisites

- A CentOS 7 operating system.
- A non-root user with sudo privileges.

Initial Steps

Check your CentOS version:

cat /etc/centos-release

Set up the timezone:

timedatectl list-timezones sudo timedatectl set-timezone 'Region/City'

Update your operating system packages (software). This is an important first step because it ensures you have the latest updates and security fixes for your operating system's default software packages:

sudo yum update -y

Install some essential packages that are necessary for basic administration of the CentOS operating system:

sudo yum install -y curl wget vim unzip socat epel-release

Wiki.js requires you to install Git version 2.7.4 or greater. Default Git version on CentOS is too old, so you will need to build it from source code. Here are the commands to quickly compile it:

Remove existing git package if installed:

sudo yum remove -y git

sudo yum groupinstall -y "Development Tools"

sudo yum install -y gettext-devel openssl-devel perl-CPAN perl-devel zlib-devel curl-devel wget https://mirrors.edge.kernel.org/pub/software/scm/git/git-2.21.0.tar.gz && tar zxvf

git-2.21.0.tar.gz

rm git-2.21.0.tar.gz

cd git-2.21.0

make configure

./configure make prefix=/usr/local all

sudo make prefix=/usr/local install

cd ~

which git

git --version

Step 1- Install Node.js and npm

Wiki.js is built on Node.js. We are going to install the latest recommended version for Wiki.js which is version 10 at the time of this writing. On Linux, you have a few Node.js installation

options: Linux Binaries (x86/x64), Source Code or via Package Managers. We will use a Package Management option which makes installing and updating Node.js a breeze.

Download and install the latest recommended version of Node.js from the NodeSource repository:

curl --silent --location https://rpm.nodesource.com/setup_10.x | sudo bash - sudo yum install -y nodejs

NOTE: npm is distributed with Node.js - which means that when you download Node.js, you automatically get npm installed on your system.

Check Node.js and npm version:

```
node -v && npm -v
# v10.15.1
# 6.4.1
```

Npm is a separate project from Node.js and tends to update more frequently. As a result, even if you've just downloaded Node.js (and therefore npm), you'll probably need to update your npm. Luckily, npm knows how to update itself! To update your npm, type this into your terminal:

sudo npm install -g npm@latest

This command will update npm to the latest stable version.

Re-check npm version with:

```
npm -v
# 6.8.0
```

And it should return the latest version number.

Step 2 - Install MongoDB database

Wiki.js needs a database to store its data, and the current stable version of Wiki.js supports only MongoDB database engine. According to that, we will need to install MongoDB database.

Create a /etc/yum.repos.d/mongodb-org-4.0.repo file so that you can install MongoDB directly using yum.

Run:

sudo vim /etc/yum.repos.d/mongodb-org-4.0.repo

And populate the file with the following config:

[mongodb-org-4.0]
name=MongoDB Repository
baseurl=https://repo.mongodb.org/yum/redhat/\$releasever/mongodb-org/4.0/x86_64/
gpgcheck=1
enabled=1
gpgkey=https://www.mongodb.org/static/pgp/server-4.0.asc

To install the latest stable version of MongoDB, issue the following command:

sudo yum install -y mongodb-org

Check the MongoDB version:

mongo --version | head -n 1 && mongod --version | head -n 1 # MongoDB shell version v4.0.6 # db version v4.0.6

Start and enable (set it to start on reboot) MongoDB service if not already started and enabled:

sudo systemctl start mongod.service sudo systemctl enable mongod.service

Step 3 - Install acme.sh client and obtain Let's Encrypt certificate (optional)

Securing your website with HTTPS is not necessary, but it is a good practice to secure your site traffic. In order to obtain an SSL certificate from Let's Encrypt, we will use acme.sh client. Acme.sh is a pure UNIX shell software for obtaining SSL certificates from Let's Encrypt with zero dependencies.

Download and install acme.sh:

sudo su - root git clone https://github.com/Neilpang/acme.sh.git cd acme.sh ./acme.sh --install --accountemail your_email@example.com source ~/.bashrc cd ~

Check acme.sh version:

```
acme.sh --version # v2.8.1
```

Obtain **RSA** and **ECC/ECDSA** certificates for your domain/hostname:

```
# RSA 2048
acme.sh --issue --standalone -d example.com --keylength 2048
# ECDSA
acme.sh --issue --standalone -d example.com --keylength ec-256
```

If you want fake certificates for testing you can add --staging flag to the above commands.

To list your issued certs you can run:

```
acme.sh --list
```

Create folders to store your certs. We will use /etc/letsencrypt but it can be anything you prefer to store SSL certs.

```
mkdir -p /etc/letsencrypt/example.com
mkdir -p /etc/letsencrypt/example.com ecc
```

Install/copy certificates to /etc/letsencrypt directory.

RSA

acme.sh --install-cert -d example.com \

- --cert-file /etc/letsencrypt/example.com/cert.pem \
- --key-file /etc/letsencrypt/example.com/private.key \
- --fullchain-file /etc/letsencrypt/example.com/fullchain.pem \
- --reloadcmd "sudo systemctl reload nginx.service"

ECC/ECDSA

acme.sh --install-cert -d example.com --ecc \

- --cert-file /etc/letsencrypt/example.com_ecc/cert.pem \
- --key-file /etc/letsencrypt/example.com ecc/private.key \
- --fullchain-file /etc/letsencrypt/example.com_ecc/fullchain.pem \
- --reloadcmd "sudo systemctl reload nginx.service"

After running the above commands, your certificates and keys will be in:

- For RSA: /etc/letsencrypt/example.com directory.
- For **ECC/ECDSA**: /etc/letsencrypt/example.com_ecc directory.

All the certificates will be automatically renewed every 60 days.

After obtaining certs, exit from root user and return back to normal sudo user:

exit

Step 4 - Install and configure NGINX

Wiki.js (or any HTTP Node.js app) can run without any actual web server (such as NGINX or Apache). However, it is highly recommended to put a standard web server in front of Wiki.js. This ensures you can use features like SSL, multiple websites, caching, etc. We will use NGINX in this tutorial, but any other server will do, you just need to configure it properly.

```
Download and install NGINX:
sudo yum install -y nginx
Check the NGINX version:
nginx -v
# nginx version: nginx/1.12.2
Enable and start NGINX service:
sudo systemctl enable nginx.service
sudo systemctl start nginx.service
Run sudo vim /etc/nginx/conf.d/wiki.js.conf and configure NGINX as an HTTPS reverse proxy.
server {
  listen [::]:443 ssl http2;
  listen 443 ssl http2;
  listen [::]:80;
  listen 80:
  server_name example.com;
  charset utf-8:
  client_max_body_size 50M;
  ssl certificate /etc/letsencrypt/example.com/fullchain.pem;
  ssl certificate key /etc/letsencrypt/example.com/private.key;
  ssl_certificate /etc/letsencrypt/example.com_ecc/fullchain.pem;
  ssl certificate key /etc/letsencrypt/example.com ecc/private.key;
```

```
location / {
    proxy_set_header Host $http_host;
    proxy_set_header X-Real-IP $remote_addr;
    proxy_pass http://127.0.0.1:3000;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection "upgrade";
    proxy_next_upstream error timeout http_502 http_503 http_504;
}
```

The only thing you need to change in the above config is server_name directive, and potentially proxy_pass directive if you decide to configure some other than 3000 port. Wiki.js uses port 3000 by default.

Check the NGINX configuration:

```
sudo nginx -t
```

Finally, for changes to take effect, we need to reload NGINX:

sudo systemctl reload nginx.service

Step 5 - Install and setup Wiki.js

Create a document root directory where Wiki.js should reside in:

```
sudo mkdir -p /var/www/wiki.js
```

Navigate to the document root directory:

cd /var/www/wiki.js

Change ownership of the /var/www/wiki.js directory to your user:

sudo chown -R [your_user]:[your_user] /var/www/wiki.js

NOTE: Replace your_user in the above command with your non-root user that you should have created as a prerequisite for this tutorial.

From /var/www/wiki.js directory, run the following command to fetch and install the latest Wiki.js application:

curl -sSo- https://wiki.js.org/install.sh | bash

Once the installation is completed, you can run the following command in order to view the currently installed version of Wiki.js:

node wiki --version # 1.0.117

Once the installation is completed, you'll be prompted to launch the configuration wizard.

So, start the configuration wizard by running:

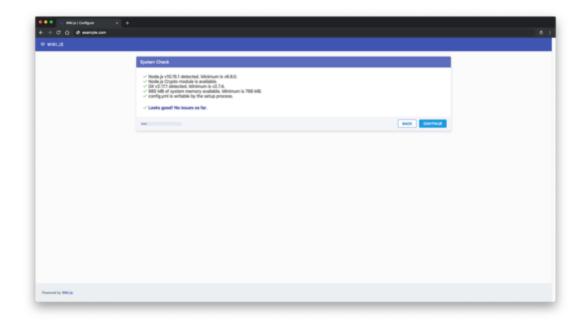
node wiki configure

Using your web browser, navigate to http://example.com and follow the on-screen instructions. All settings entered during the configuration wizard are saved in the config.yml file. The configuration wizard will automatically start Wiki.js for you.

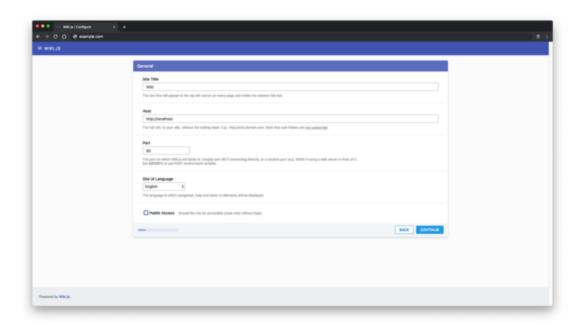
First, you will see a welcome message. Click on the "**Start**" button:



Next "System Check" page will appear. If all requirements are met, click on the "Continue" button.



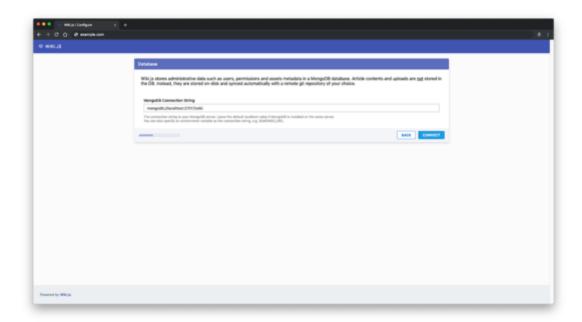
Enter general information about your wiki and click the **"Continue"** button:



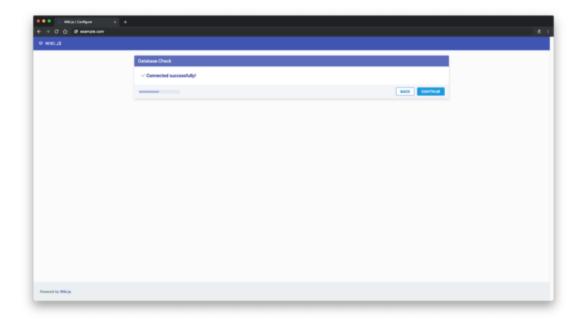
Read the "Important Consideration" notice and click "Continue" for the next step:



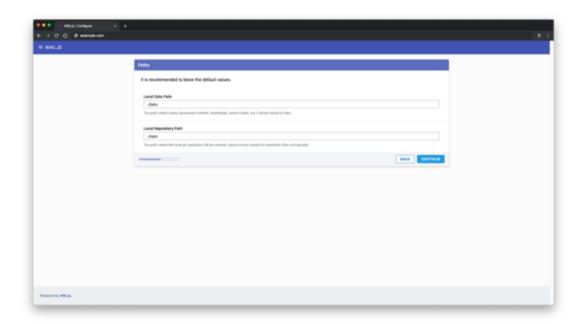
Next, connect to the database and continue:



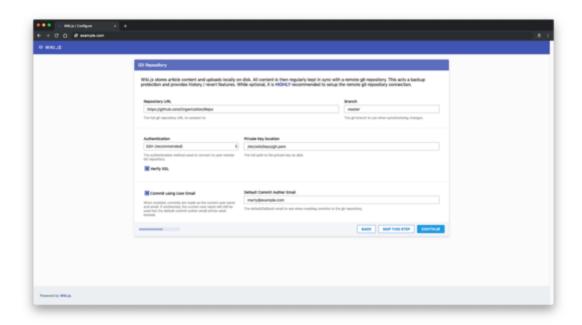
You should see a message that Wiki.js has been successfully connected to the database. Click the **"Continue"** button:



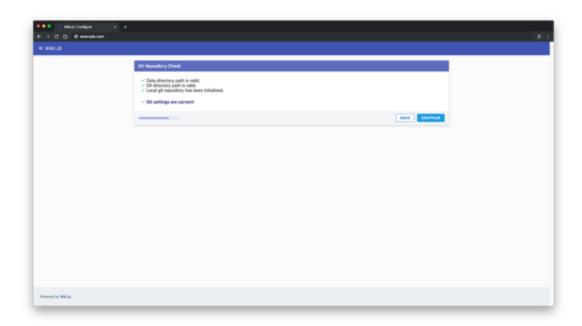
Set paths and continue:



Set up remote Git repo if you want or skip this step. This step is optional but highly recommended:



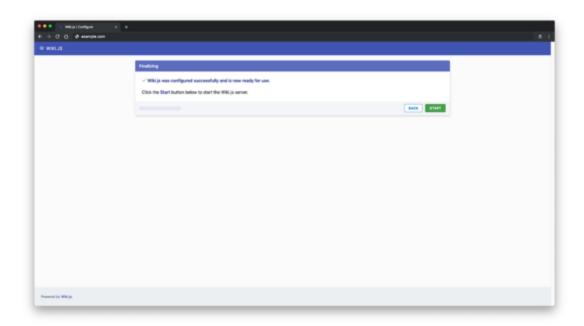
Next, click the "Continue" button:



Create an admin account and click the **"Continue"** button:



And finally, start the Wiki.js:



Wait around 30 seconds and you should be redirected to Wiki.js homepage:



The installation is completed. You should wiki welcome page:



Step 6 - Setup PM2 Process Manager

By default, Wiki.js will not start automatically after a system reboot. In order to make it start on boot, we need to setup PM2 process manager. PM2 comes bundled with Wiki.js as a local npm module, so we don't need to install PM2 globally.

Tell PM2 to configure itself as a startup service by running:

/var/www/wiki.js/node modules/pm2/bin/pm2 startup

Finally, save the current PM2 configuration by running the command:

/var/www/wiki.js/node_modules/pm2/bin/pm2 save

Your Wiki.js now runs as a background process, using PM2 as its process manager.

Ubuntu 18.04

How to Install Wiki.js on Ubuntu 18.04 LTS

In this tutorial, we will walk you through the Wiki.js version 1 installation process on a Ubuntu 18.04 LTS operating system by using NGINX as a reverse proxy server, MongoDB as a database server, PM2 as a process manager and optionally you can secure transport layer by using acme.sh client and Let's Encrypt certificate authority to add SSL support.

Requirements

Requirements to run Wiki.js are the following:

- Node.js 6.11.1 to 10.x is required.
- MongoDB version 3.2 or later.
- Git version 2.7.4 or later.
- Web Server software such as NGINX, Apache, Caddy, H2O...
- An empty Git repository (optional).
- Minimum of 512MB RAM. 1GB of RAM recommended.
- About 300MB of disk space.
- Domain name with A/AAAA DNS records set up.

Prerequisites

- An Ubuntu 18.04 LTS operating system.
- A non-root user with sudo privileges.

Initial Steps

Check your Ubuntu version:

lsb_release -ds # Ubuntu 18.04.1 LTS

Set up the timezone:

sudo dpkg-reconfigure tzdata

Update your operating system packages (software). This is an important first step because it ensures you have the latest updates and security fixes for your operating system's default software packages:

sudo apt update && sudo apt upgrade -y

Install some essential packages that are necessary for basic administration of Ubuntu operating system:

sudo apt install -y curl wget vim git unzip socat bash-completion apt-transport-https build-essential

Step 1- Install Node.js and npm

Wiki.js is built on Node.js. We are going to install the latest recommended version for Wiki.js which is version 10 at the time of this writing. On Linux, you have a few Node.js installation options: Linux Binaries (x86/x64), Source Code or via Package Managers. We will use a Package Management option which makes installing and updating Node.js a breeze.

Download and install the latest recommended version of Node.js from the NodeSource repository:

curl -sL https://deb.nodesource.com/setup_10.x | sudo -E bash - sudo apt install -y nodejs

NOTE: npm is distributed with Node.js - which means that when you download Node.js, you automatically get npm installed on your system.

Check Node.js and npm version:

node -v && npm -v # v10.15.1 # 6.4.1 Npm is a separate project from Node.js and tends to update more frequently. As a result, even if you've just downloaded Node.js (and therefore npm), you'll probably need to update your npm. Luckily, npm knows how to update itself! To update your npm, type this into your terminal:

sudo npm install -g npm@latest

This command will update npm to the latest stable version.

Re-check npm version with:

npm -v # 6.8.0

And it should return the latest version number.

Step 2 - Install MongoDB database

Wiki.js needs a database to store its data, and the current stable version of Wiki.js supports only MongoDB database engine. According to that, we will need to install MongoDB database.

Download and install MongoDB database:

sudo apt install -y mongodb

Check the MongoDB version:

mongo --version | head -n 1 && mongod --version | head -n 1 # MongoDB shell version v3.6.3 # db version v3.6.3

Start and enable (set it to start on reboot) MongoDB service if not already started and enabled:

sudo systemctl start mongodb.service sudo systemctl enable mongodb.service

Step 3 - Install acme.sh client and obtain Let's Encrypt certificate (optional)

Securing your website with HTTPS is not necessary, but it is a good practice to secure your site traffic. In order to obtain an SSL certificate from Let's Encrypt, we will use acme.sh client. Acme.sh is a pure UNIX shell software for obtaining SSL certificates from Let's Encrypt with zero dependencies.

Download and install acme.sh:

```
sudo su - root
git clone https://github.com/Neilpang/acme.sh.git
cd acme.sh
./acme.sh --install --accountemail your_email@example.com
source ~/.bashrc
cd ~
```

Check acme.sh version:

```
acme.sh --version # v2.8.1
```

Obtain **RSA** and **ECC/ECDSA** certificates for your domain/hostname:

```
# RSA 2048
acme.sh --issue --standalone -d example.com --keylength 2048
# ECDSA
acme.sh --issue --standalone -d example.com --keylength ec-256
```

If you want fake certificates for testing you can add --staging flag to the above commands.

To list your issued certs you can run:

```
acme.sh --list
```

Create folders to store your certs. We will use /etc/letsencrypt but it can be anything you prefer to store SSL certs.

```
mkdir -p /etc/letsencrypt/example.com
mkdir -p /etc/letsencrypt/example.com_ecc
```

Install/copy certificates to /etc/letsencrypt directory.

RSA

acme.sh --install-cert -d example.com \

- --cert-file /etc/letsencrypt/example.com/cert.pem \
- --key-file /etc/letsencrypt/example.com/private.key \
- --fullchain-file /etc/letsencrypt/example.com/fullchain.pem \
- --reloadcmd "sudo systemctl reload nginx.service"

ECC/ECDSA

```
acme.sh --install-cert -d example.com --ecc \
```

--cert-file /etc/letsencrypt/example.com_ecc/cert.pem \

- --key-file /etc/letsencrypt/example.com ecc/private.key \
- --fullchain-file /etc/letsencrypt/example.com ecc/fullchain.pem \
- --reloadcmd "sudo systemctl reload nginx.service"

After running the above commands, your *certificates* and *keys* will be in:

- For RSA: /etc/letsencrypt/example.com directory.
- For **ECC/ECDSA**: /etc/letsencrypt/example.com_ecc directory.

All the certificates will be automatically renewed every 60 days.

After obtaining certs, exit from root user and return back to normal sudo user:

exit

Step 4 - Install and configure NGINX

Wiki.js (or any HTTP Node.js app) can run without any actual web server (such as NGINX or Apache). However, it is highly recommended to put a standard web server in front of Wiki.js. This ensures you can use features like SSL, multiple websites, caching, etc. We will use NGINX in this tutorial, but any other server will do, you just need to configure it properly.

Download and install NGINX from the official NGINX repo by issuing the following commands:

```
wget https://nginx.org/keys/nginx_signing.key
sudo apt-key add nginx_signing.key
rm nginx_signing.key
sudo -s
printf "deb https://nginx.org/packages/mainline/ubuntu/ $(lsb_release -sc) nginx\ndeb-src
https://nginx.org/packages/mainline/ubuntu/ $(lsb_release -sc) nginx\n" >>
/etc/apt/sources.list.d/nginx_mainline.list
exit
sudo apt update
sudo apt install -y nginx
```

Check the NGINX version:

sudo nginx -v # nginx version: nginx/1.15.8

Enable and start NGINX service:

sudo systemctl enable nginx.service sudo systemctl start nginx.service

```
Run sudo vim /etc/nginx/conf.d/wiki.js.conf
sudo vim /etc/nginx/conf.d/wiki.js.conf
and configure NGINX as an HTTPS reverse proxy.
server {
  listen [::]:443 ssl http2;
  listen 443 ssl http2;
  listen [::]:80;
  listen 80;
  server name example.com;
  charset utf-8;
  client max_body_size 50M;
  ssl_certificate /etc/letsencrypt/example.com/fullchain.pem;
  ssl_certificate_key /etc/letsencrypt/example.com/private.key;
  ssl certificate /etc/letsencrypt/example.com ecc/fullchain.pem;
  ssl certificate key /etc/letsencrypt/example.com ecc/private.key;
  location / {
     proxy_set_header Host $http_host;
     proxy_set_header X-Real-IP $remote_addr;
     proxy_pass http://127.0.0.1:3000;
     proxy_http_version 1.1;
     proxy set header Upgrade $http upgrade;
     proxy_set_header Connection "upgrade";
     proxy_next_upstream error timeout http_502 http_503 http_504;
  }
}
```

The only thing you need to change in the above config is server_name directive, the domain name in the ssl file paths, and potentially proxy_pass directive if you decide to configure some other than 3000 port. Wiki.js uses port 3000 by default.

Check the NGINX configuration:

```
sudo nginx -t
```

Finally, for changes to take effect, we need to reload NGINX:

sudo systemctl reload nginx.service

Step 5 - Install and setup Wiki.js

Create a document root directory where Wiki.js should reside in:

sudo mkdir -p /var/www/wiki.js

Navigate to the document root directory:

cd /var/www/wiki.js

Create a user for wikijs

sudo useradd -d /var/www/wiki.js wikijs

Change ownership of the /var/www/wiki.js directory to wikijs user:

sudo chown -R wikijs:wikijs /var/www/wiki.js

From /var/www/wiki.js directory, run the following command to fetch and install the latest Wiki.js application:

cd /var/www/wiki.js sudo su wikijs curl -sSo- https://wiki.js.org/install.sh | bash

Once the installation is completed, you can run the following command in order to view the currently installed version of Wiki.js:

node wiki --version # 1.0.117

Once the installation is completed, you'll be prompted to launch the configuration wizard.

So, start the configuration wizard by running:

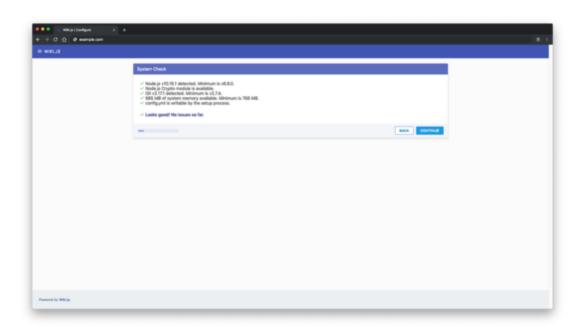
node wiki configure

Using your web browser, navigate to http://example.com and follow the on-screen instructions. All settings entered during the configuration wizard are saved in the config.yml file. The configuration wizard will automatically start Wiki.js for you.

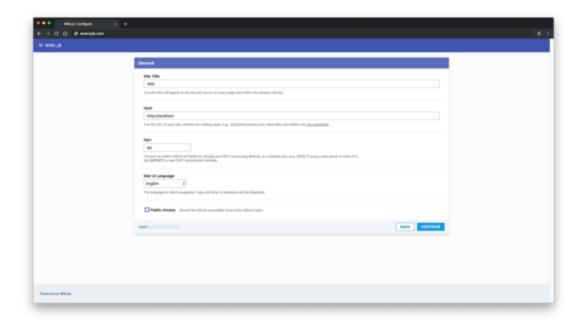
First, you will see a welcome message. Click on the "Start" button:



Next "System Check" page will appear. If all requirements are met, click on the "Continue" button.



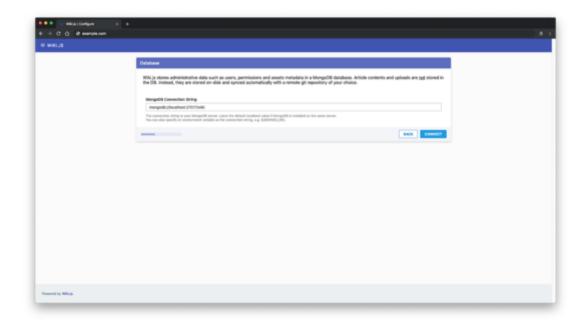
Enter general information about your wiki and click the **"Continue"** button:



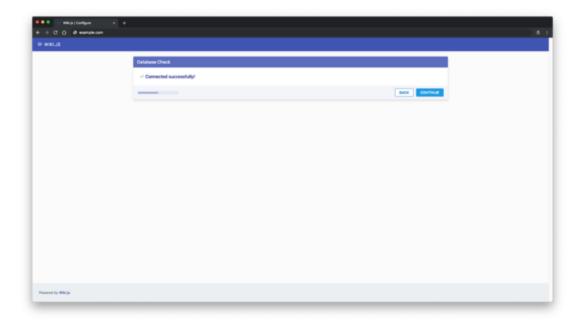
Read the "Important Consideration" notice and click "Continue" for the next step:



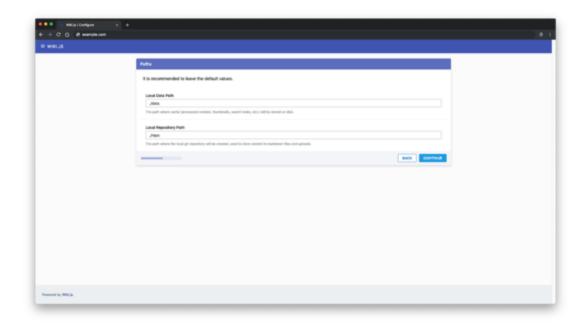
Next, connect to the database and continue:



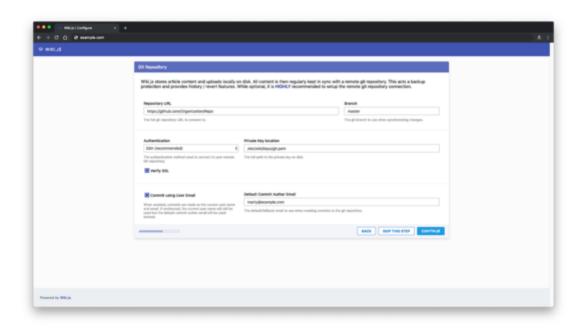
You should see a message that Wiki.js has been successfully connected to the database. Click the **"Continue"** button:



Set paths and continue:



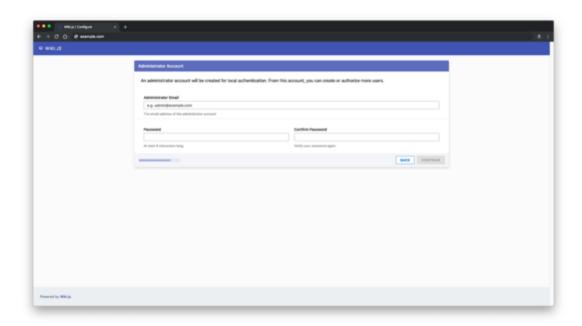
Set up remote Git repo if you want or skip this step. This step is optional but highly recommended:



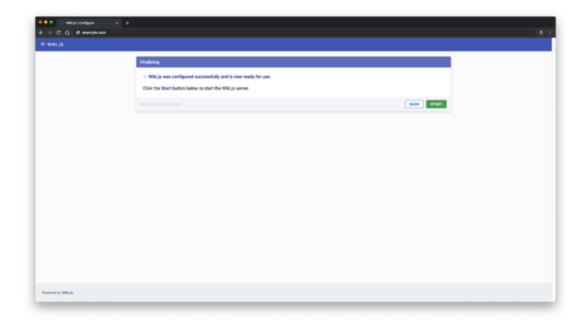
Next, click the "Continue" button:



Create an admin account and click the **"Continue"** button:



And finally, start the Wiki.js:



Wait around 30 seconds and you should be redirected to Wiki.js homepage:



The installation is completed. You should wiki welcome page:



Step 6 - Setup PM2 Process Manager

By default, Wiki.js will not start automatically after a system reboot. In order to make it start on boot, we need to setup PM2 process manager. PM2 comes bundled with Wiki.js as a local npm module, so we don't need to install PM2 globally.

Tell PM2 to configure itself as a startup service by running:

/var/www/wiki.js/node_modules/pm2/bin/pm2 startup

Finally, save the current PM2 configuration by running the command:

/var/www/wiki.js/node_modules/pm2/bin/pm2 save

Your Wiki.js now runs as a background process, using PM2 as its process manager.