Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

[Get started]   [Download]

Currently v4.2.1

Installation

Include Bootstrap's source Sass and JavaScript files via npm, Composer or Meteor. Package managed installs don't include documentation, but do include our build system and readme.

```
$ npm install bootstrap

$ gem install bootstrap -v 4.2.1
```

[Read installation docs]

BootstrapCDN

When you only need to include Bootstrap's compiled CSS or JS, you can use [BootstrapCDN](#).

CSS only

```
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/
 integrity="sha384-
GJzZqFGwb1QTTN6wy59ffF1BuGJpLSa9DkKMp0Dgi
 crossorigin="anonymous">
```

JS, Popper.js, and jQuery

```
<script
src="https://code.jquery.com/jquery-
3.3.1.slim.min.js" integrity="sha384-
q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smX
 crossorigin="anonymous"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/li
 integrity="sha384-
wHAiFfRlMFy6i5SRaxvfOCifBUQy1xHdJ/yoi7FRN
 crossorigin="anonymous"></script>
<script
src="https://stackpath.bootstrapcdn.com/b
 integrity="sha384-
B0UglyR+jN6CkvvICOB2joaf5I4l3gm9GU6Hc1og6
 crossorigin="anonymous"></script>
```

[Explore the docs]

Official Themes

Take Bootstrap 4 to the next level with official premium themes—toolkits built on Bootstrap with new components and plugins, docs, and build tools.

[Browse themes]

What is a CDN?

Explore how a CDN works under the hood to deliver fast, efficient and secure delivery of content to websites and Internet services.

What is a CDN? ▼

What is a CDN?

A content delivery network (CDN) refers to a geographically distributed group of servers which work together to provide fast delivery of Internet content.

A CDN allows for the quick transfer of assets needed for loading Internet content including HTML pages, javascript files, stylesheets, images, and videos. The popularity of CDN

A properly configured CDN may also help protect websites against some common malicious attacks, such as [Distributed Denial of Service (DDOS) attacks](#).

Is a CDN the same as a web host?

While a CDN does not host content and can't replace the need for proper web hosting, it does help cache content at the network edge, which improves website performance. Many websites struggle to have their [performance](#) needs met by traditional hosting services, which is why they opt for CDNs.

By utilizing caching to reduce hosting bandwidth, [helping to prevent interruptions in service](#), and [improving security](#), CDNs are a popular choice to relieve some of the major pain points that come with traditional web hosting.

What are the benefits of using a CDN?

Although the benefits of using a CDN vary depending on the size and needs of an Internet property, the primary benefits for most users can be broken down into 4 different components:

1. Improving website load times - By distributing content closer to website visitors by using a nearby CDN server (among other optimizations), visitors experience faster page loading times. As visitors are more inclined to click away from a slow-loading site, a CDN can reduce bounce rates and increase the amount of time that people spend on the site. In other words, a faster a website means more visitors will stay and stick around longer.

2. Reducing bandwidth costs - Bandwidth consumption costs for website hosting is a primary expense for websites. Through caching and other optimizations, CDNs are able to reduce the amount of data an origin server must provide, thus reducing hosting costs for website owners.

4. **Improving website security** – A CDN may improve security by providing DDoS mitigation, improvements to security certificates, and other optimizations.

How does a CDN work?

At its core, a CDN is a network of servers linked together with the goal of delivering content as quickly, cheaply, reliably, and securely as possible. In order to improve speed and connectivity, a CDN will place servers at the exchange points between different networks.

These **Internet exchange points (IXPs)** are the primary locations where different Internet providers connect in order to provide each other access to traffic originating on their different networks. By having a connection to these high speed and highly interconnected locations, a CDN provider is able to reduce costs and transit times in high speed data delivery.
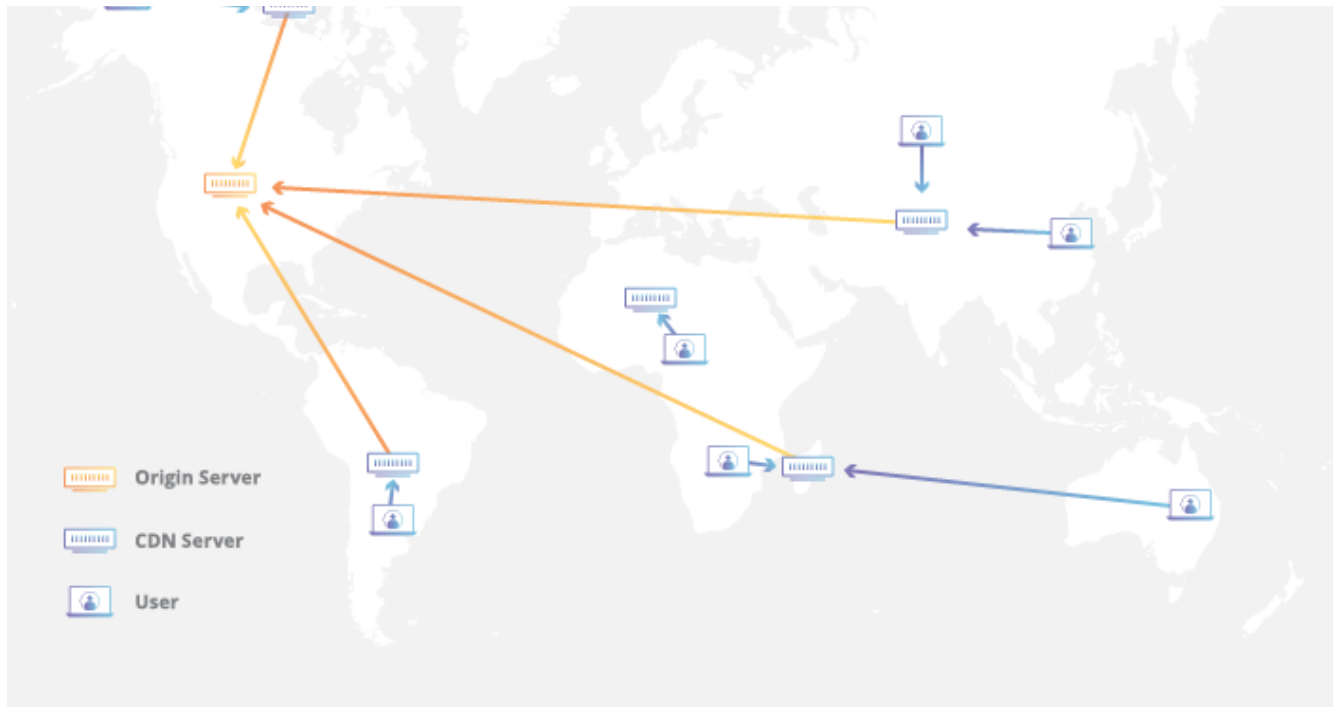
Beyond placement of servers in IXPs, a CDN makes a number of optimizations on standard client/server data transfers. CDNs place Data Centers at strategic locations across the globe, enhance security, and are designed to survive various types of failures and Internet congestion.

Latency - How does a CDN improve website load times?

When it comes to websites loading content, users drop off quickly as a site slows down. CDN services can help to reduce load times in the following ways:

The globally distributed nature of a CDN means reduce distance between users and website resources. Instead of having to connect to wherever a website's **origin server** may live, a CDN lets users connect to a geographically closer **data center**. Less travel time means faster service.

Hardware and software optimizations such as efficient load balancing and solid-state hard drives can help data reach the user faster.

CDNs can reduce the amount of data that's transferred by reducing file sizes using tactics such as minification and file compression. Smaller file sizes mean quicker load times.

Reliability and Redundancy - How does a CDN keep a website always online?

Uptime is a critical component for anyone with an Internet property. Hardware failures and spikes in traffic, as a result of either malicious attacks or just a boost in popularity, have the potential to bring down a web server and prevent users from accessing a site or service. A well-rounded CDN has several features that will minimize downtime:

Load balancing distributes network traffic evenly across several servers, making it easier to scale rapid boosts in traffic.

Intelligent failover provides uninterrupted service even if one or more of the CDN servers go offline due to hardware malfunction; the failover can redistribute the traffic to the other operational servers.

In the event that an entire data center is having technical issues, **Anycast** routing transfers the traffic to another available data center, ensuring that no users lose access to the website.

Learn more about how a CDN helps keep websites online

Data Security - How does a CDN protect data?

Information security is an integral part of a CDN. a CDN can keep a site secured with fresh TLS/SSL certificates which will ensure a high standard of authentication, encryption, and integrity. Investigate the security concerns surrounding CDNs, and explore what can be done to securely deliver content. **Learn about CDN SSL/TLS security**

Bandwidth Expense - How does a CDN reduce bandwidth costs?

Every time an origin server responds to a request, bandwidth is consumed. See how a CDN, like the **Cloudflare CDN**, cuts down on origin requests. (coming soon)

CDN Performance ▶

CDN Reliability ▸

CDN Glossary ▸

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