



ABES
Engineering College
College Code-032

WEB DESIGNING (KIT401)

B.TECH - Information Technology , IV Semester

Web Hosting

Web Hosting

Definition: Web hosting is the activity or service of providing storage space to individuals or organizations to post a website or web page onto the Internet. The web sites are available via world wide web.

Web hosting is a necessity for any website — it is the physical location of your website on the Internet, an online storage center that houses the information, images, video, and other content that comprises your website.



Web Host

- Web hosting service provider or the companies which offer website hosting.
- A business that provides the technologies and services needed for the website or webpage to be viewed in the internet.



Web Server



Special computers where websites are hosted, or stored

Remain switched on 24 x7

Has its own IP address, which points to the domain name

Hosting a Website



Step 1: Decide What Type of Website You Want

Step 2: Choose Your Hosting Server

Step 3: Select Your Web Hosting Plan

Step 4: Change Your DNS Address

Step 5: Upload Your Website

Choosing your hosting server and other services

- While choosing a web hosting provider, make sure it provides typical but essential benefits such as solid firewall protection, data backup, domain name registration, technical support, email services, and website building tools and applications.
- Choose other providers that support all the technologies that you intend to use. Few third-party services to be considered:
 - Amazon Web Services
 - Pingdom
 - PagerDuty

Hosting a Website

- Register a domain:
 - Buy your domain from a domain name registrar like Domain.com, Bluehost, HostGator, GoDaddy, or Google Domain
- Nameservers (DNS):
 - The nameserver is the middle man that points your website visitors toward the correct IP address. Many times the same company will provide both your registrar and DNS services, but you can choose to go with a different DNS if you want.
 - Some common ones are CloudFlare, OpenDNS, CleanBrowsing, and Google Public DNS.
- Web hosting:
 - The actual files that make up the website reside in a server maintained by your web hosting company.

Types of Hosting

Different types of hosting that can be availed as per the need:

 Shared Hosting Virtual Private Server (VPS) Dedicated server Reseller Hosting Grid Hosting Cloud Hosting

Shared Hosting

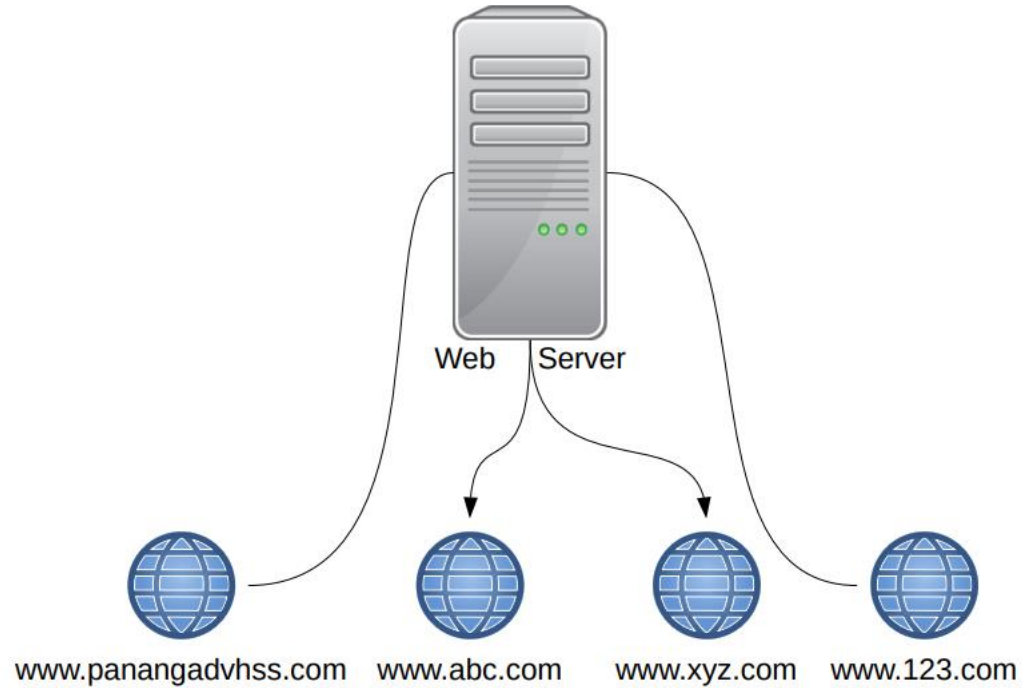
Shared hosting is perfect for entry-level website hosting. This is where your website will be stored on the same server as multiple other websites. With a shared hosting plan, all domains share the same server resources, such as RAM (Random Access Memory) and CPU (Central Processing Unit). However, because all resources are shared, the cost of shared hosting plans are relatively low, making them an excellent option for website owners in their beginning stages.

The hosting company puts thousand of website on the same physical server.

Each customer has their own allocation of physical web space and a set of bandwidth limit.

Due to sharing, one website on the server experiencing high traffic load will affect performance of all websites on the server.

Shared Hosting



Dedicated Server

Dedicated **web hosting** server is where customers have an entire server and all its resources **dedicated** to their personal use. Dedicated hosting typically offers the following advantages and disadvantages.

Flexibility & customization – customers can choose the exact hardware and software specifications of the server to meet their needs.

Dedicated resources and guaranteed performance – customers don't share their server resources with anyone else.

Full control – customers have full root access to their servers and can configure and tweak their setup to meet their needs.

Prior technical knowledge is required – unless a server management option has been selected it will be your responsibility to manage and configure the server.

More expensive – the cost of the server isn't shared with any other customers.

Single dedicated server is setup for single customer

Commonly used by the businesses that need the power, control and security

Dedicated Hosting



Web Server



www.google.com

Virtual Private Server

VPS stands for Virtual Private Servers, and is essentially a half-way house between shared **web hosting** and dedicated **web hosting**.

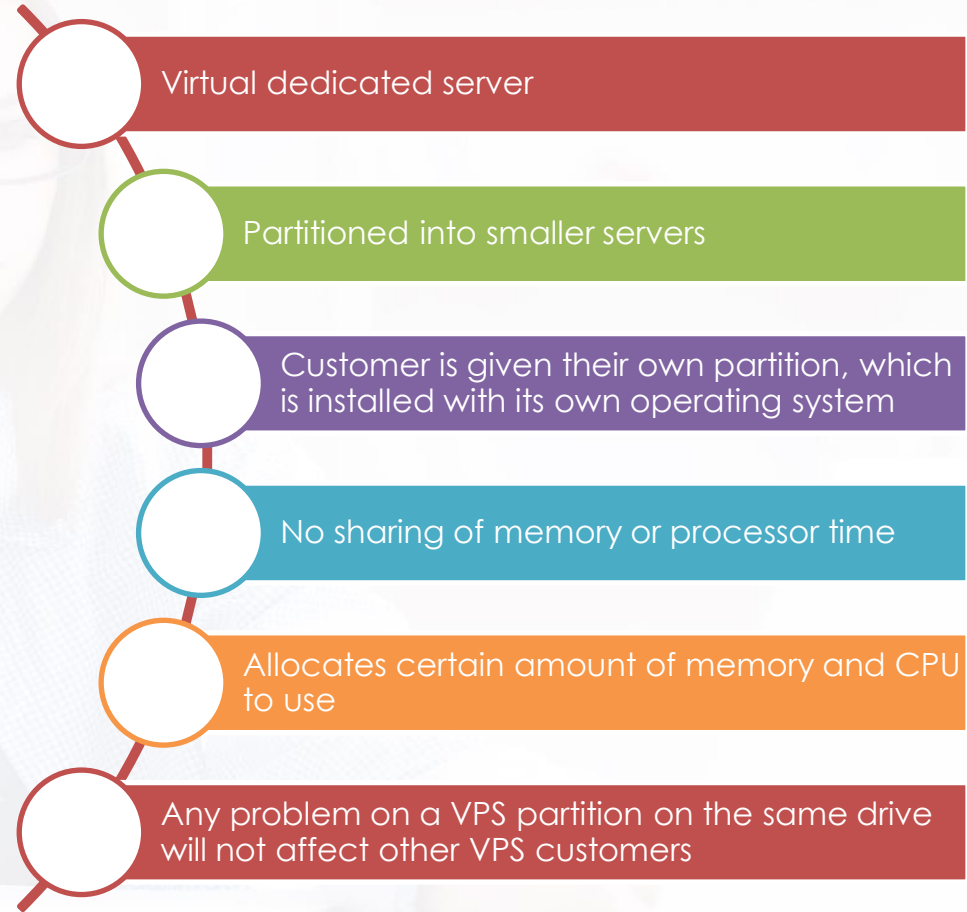
VPS customers still share the physical server hardware with other VPS customers, but special **virtualization** technology partitions the **web hosting** server so that each partition has its own dedicated resources and can be configured almost like a full dedicated server.

This typically offers the following advantages and disadvantages:

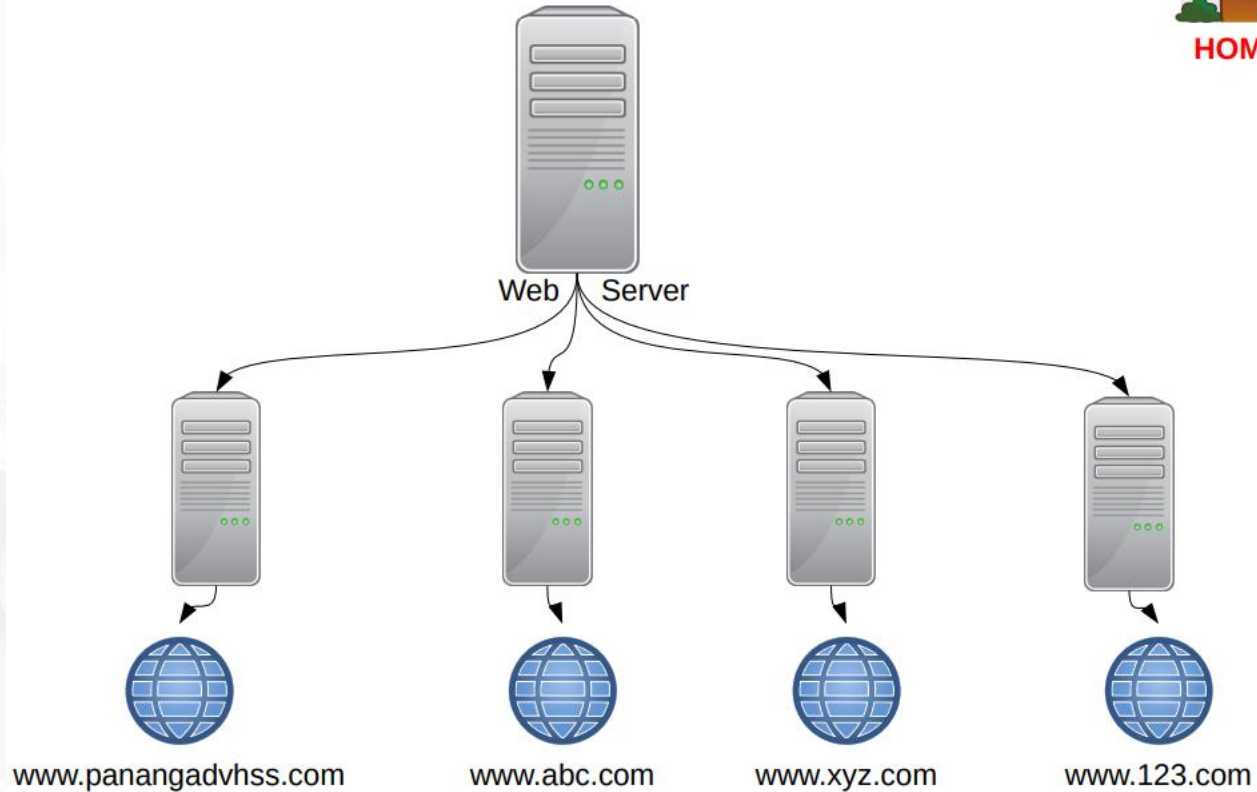
Your website will have partitioned resources such as **CPU** and **memory** – so noisy neighbors sharing the same hardware as you will have less of an effect.

Less customers occupy the same **web hosting** server – so your website will have more resources at its disposal than shared web hosting, but your monthly fee will typically be higher.

The **virtualization** software provides much more freedom to configure your **web hosting** server, but it



Virtual Private Server(VPS)



Other Types Hosting

Cloud hosting essentially means that multiple servers are joined together to provide better and faster hosting performance. Having cloud hosting means that websites load faster and their workload is balanced. There is a small question of security for the most conscious users, because multiple websites share the same cloud. However, for the majority of users, the pros outweigh the cons.

Colocated hosting is similar to dedicated hosting, it literally means co-located hosting. It allows you to place your own server on the service provider's location. It is the same as having a server in your own office, but located in a place specifically designed for servers.

Managed hosting is almost the same as the dedicated hosting. You get your own server; the only difference is that you do not have full control over it. This way service providers prevent users from potentially changing configuration or modifying the server. But don't worry, you can still manage all of your data.

Reseller hosting is where you (as a client) can become a web host yourself. What it means is that you buy a provider's services and sell them (for a profit) to third party. This option can include any other type of hosting, but it requires that you have IT knowledge since you will become a host meaning that you will have to solve all hosting problems.

Web hosting Companies

Following are the several companies offering web hosting service:



Blue Host

Go Daddy

Host Gator

just Host

Laughing Squid

Wix

Wired Tree

Name Server

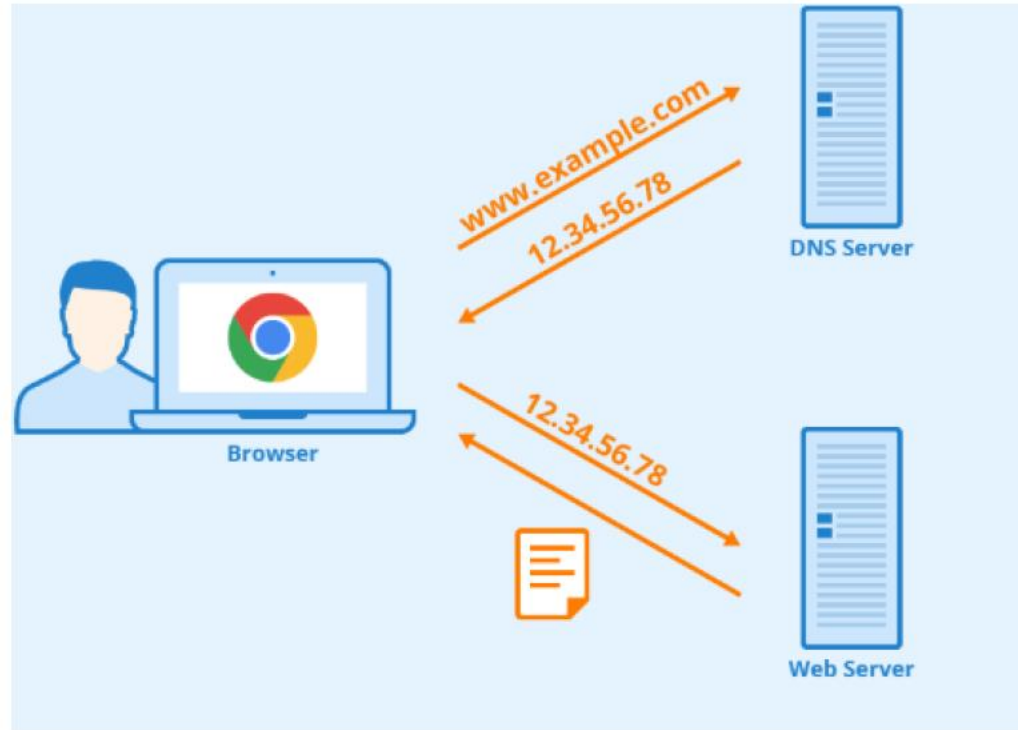
- A name server is a computer application that implements a network service for providing responses to queries against a directory service.
- It translates an often humanly meaningful, text-based identifier to a system-internal, often numeric identification or addressing component.
 - You type “www.example.com” into your browser.
 - Your browser uses DNS to look up the nameservers for www.example.com.
 - The nameservers ns1.yourhostdomain.com and ns2.yourhostdomain.com are retrieved.
 - Your browser uses the nameservers to look up the IP address for www.example.com.
 - Your browser gets the response: “22.231.113.64”
 - Your browser sends a request to 22.231.113.64, including the specific page you’re trying to reach.
 - The web server hosting your website sends the requested page to your browser.

DNS or “Domain Name System”

The domain name system (DNS) is a naming database in which internet [domain](#) names are located and translated into [Internet Protocol \(IP\) addresses](#). The domain name system maps the name people use to locate a website to the IP address that a computer uses to locate that website.

For example, if someone types "example.com" into a web browser, a server behind the scenes maps that name to the corresponding IP address. An IP address is similar in structure to 203.0.113.72.

Web browsing and most other internet activities rely on DNS to quickly provide the information necessary to connect users to remote hosts. DNS mapping is distributed throughout the internet in a hierarchy of authority. [Access providers](#) and enterprises, as well as governments, universities and other organizations, typically have their own assigned ranges of IP addresses and an assigned domain name. They also typically run DNS servers to manage the mapping of those names to those addresses. Most Uniform Resource Locators (URLs) are built around the domain name of the web server that takes



Registering Domain Name

- Find a domain name registrar.
- Search for your domain name.
- Finalize your domain name choice.
- Choose a domain name suffix, such as .com or .net.
- Purchase the domain name.
- Add Domain ID protection.

Using Control Panels

- A control panel is a popular tool used to manage your hosting account.
- You can use it to manage your purchased domain names, install applications, create and manage email accounts, upload website files, and more.
- You can do all of this by logging in directly to the server.
- web panels are usually intuitive, simple, and help users save time.
- six of the most popular control panels are:
 1. hPanel
 2. Plesk
 3. cPanel
 4. DirectAdmin
 5. Webmin
 6. ispmanager

Using Control Panels

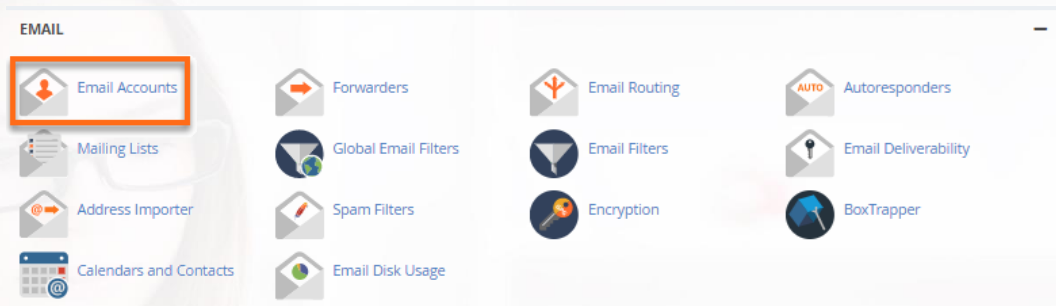
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- web panels are usually intuitive, simple, and help users save time.
- The most popular control panels are:
 - cPanel - the most popular and widely used, very customizable
 - Plesk - similar in functions to cPanel but with different layout
 - ISPConfig - open source, with the ability to manage multiple servers
 - OpenPanel - open source, very user friendly and easy to navigate

Tasks of Control Panels

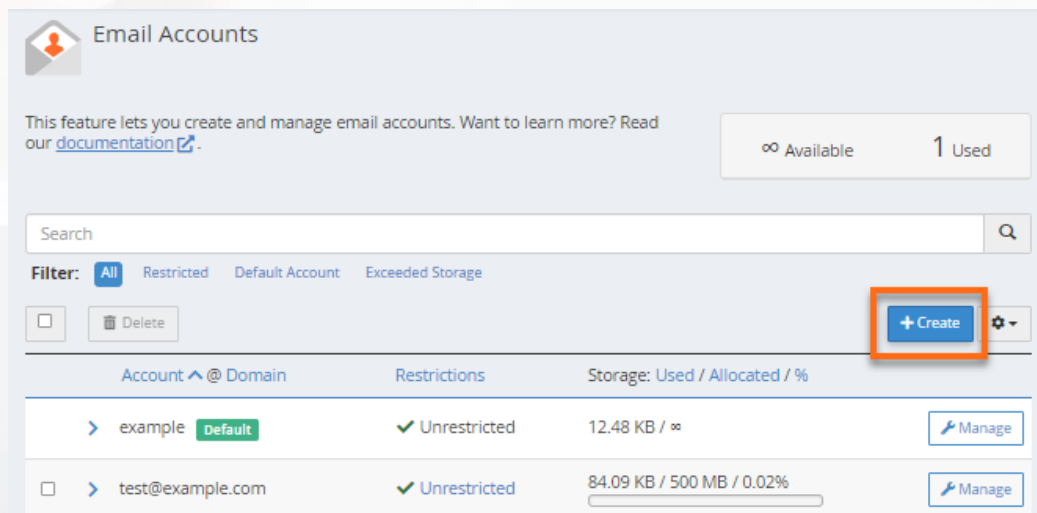
- Account administration
- Domain management
- One-click installation
- Email management
- FTP
- Database management
- File management
- Backups
- Support

Creating Emails in Cpanel

- Log in to cPanel.
- Look for the Email section, then click Email Accounts

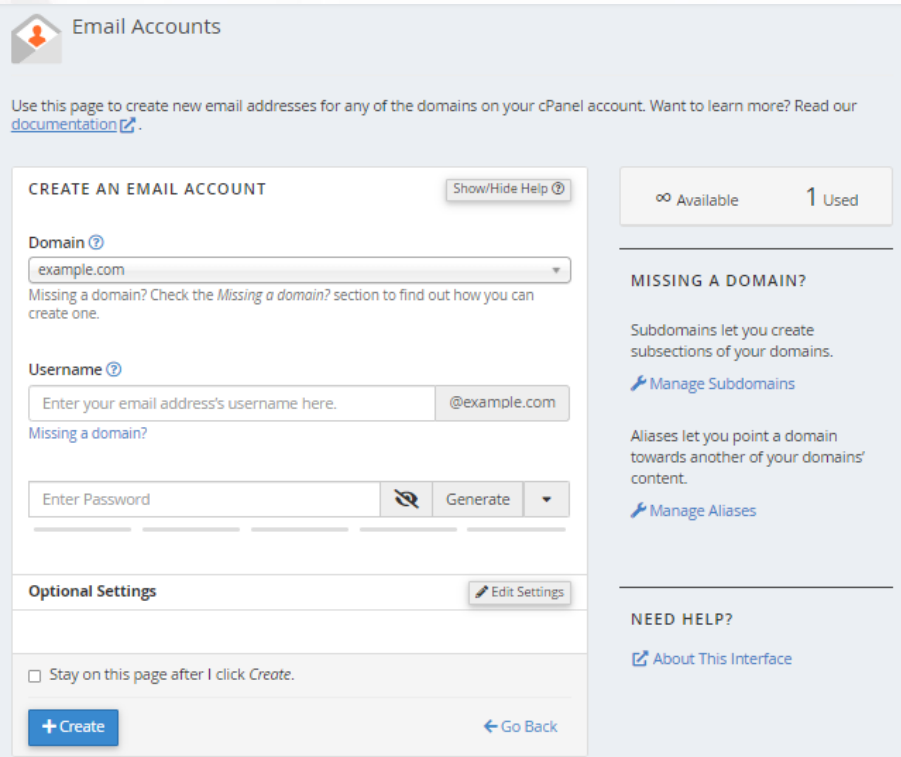


- Click the + Create button located on the right-hand side



Creating Emails in Cpanel

- Enter the required details to create a new email account on the next page
 - Domain: Select the domain where you wish to create the new email account.
 - Username: Enter your email username.
 - Password: Enter your email password.



Email Accounts

Use this page to create new email addresses for any of the domains on your cPanel account. Want to learn more? Read our [documentation](#).

CREATE AN EMAIL ACCOUNT [Show/Hide Help](#)

Domain [?](#)
example.com
Missing a domain? Check the [Missing a domain?](#) section to find out how you can create one.

Username [?](#)
Enter your email address's username here. @example.com
Missing a domain?

Enter Password [🔍](#) [Generate](#) [▼](#)

Optional Settings [Edit Settings](#)

☐ Stay on this page after I click *Create*.

[+ Create](#) [← Go Back](#)

MISSING A DOMAIN?
Subdomains let you create subsections of your domains.
[Manage Subdomains](#)

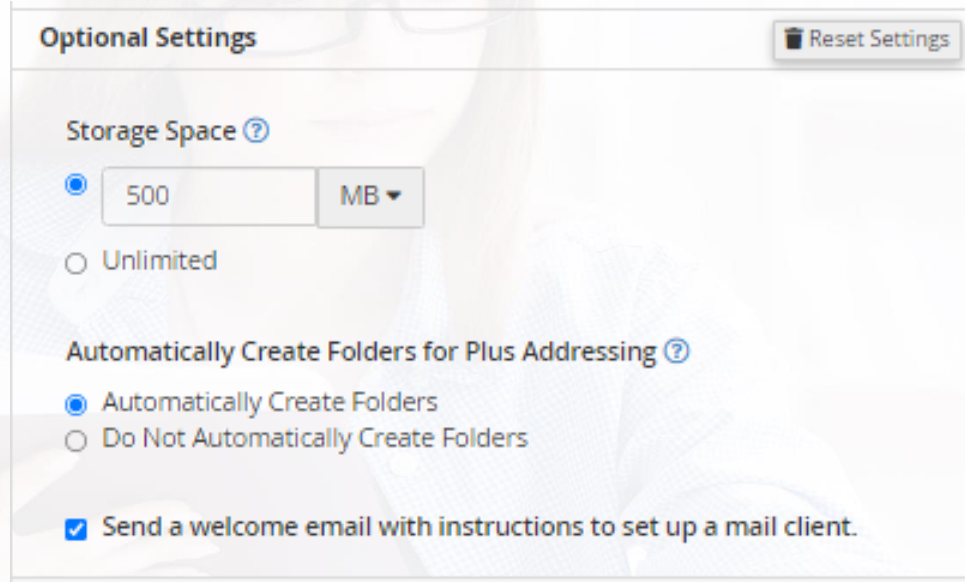
NEED HELP?
[About This Interface](#)

Aliases let you point a domain towards another of your domains' content.
[Manage Aliases](#)

∞ Available 1 Used

Creating Emails in Cpanel

- You will notice the Optional Settings. Click the Edit Settings button to customize the new email account. This is where you can set your email's storage space.



The screenshot shows the 'Optional Settings' dialog box in Cpanel. At the top right is a 'Reset Settings' button. The 'Storage Space' section has a radio button selected for '500 MB' and another for 'Unlimited'. The 'Automatically Create Folders for Plus Addressing' section has a radio button selected for 'Automatically Create Folders' and another for 'Do Not Automatically Create Folders'. At the bottom, there is a checked checkbox for 'Send a welcome email with instructions to set up a mail client.'.

Optional Settings [Reset Settings](#)

Storage Space [?](#)

☒ 500 MB ☐ Unlimited

Automatically Create Folders for Plus Addressing [?](#)

☒ Automatically Create Folders ☐ Do Not Automatically Create Folders

☒ Send a welcome email with instructions to set up a mail client.

- Click + Create to finalize.

Using FTP Client

- The File Transfer Protocol (or FTP for short) is a network protocol for transferring files over the internet.
- FTP can be very useful for website owners, as it lets you upload website files from your personal device to your hosting server.
- An FTP client is an application on your computer that connects you to remote servers through FTP and other protocols.
- An FTP client provides an environment in which you can upload files to a server, download files from a server to your device, and view and manage files stored on your web server.

FTP Clients for Windows and macOS

- Cyberduck (for Windows and macOS)
- FileZilla (for Windows and macOS)
- WinSCP (for Windows)
- Free FTP (for Windows)
- CuteFTP (for Windows)
- Transmit (for macOS)
- ForkLift (for macOS)
- CloudMounter (for macOS)

Maintaining a Website

- Website maintenance is the practice of monitoring your website's overall health and performance.
- Keeping a website up-to-date is crucial to ensuring it's working at full capacity, engaging and retaining site visitors
- Maintenance has to be done:
 - To be done weekly
 - To be done monthly
 - To be done quarterly
 - To be done yearly

1. To be done weekly

- Check that all of your pages are loading without errors
- Run a backup and make sure a previous version of your site is stored
- Make updates to website software and plugins
- Check that all of your forms are running properly
- Remove any spam comments from pages and posts
- Check your pages to see if there are any broken links
- Search for 404 errors and fix or redirect
- Write one or more blog posts to keep your community engaged and encourage SEO traffic.

2. To be done monthly

- Check the load speed of your website and ensure that nothing is bogging it down
- Review your security scans and make sure nothing is out of place
- Analyze website statistics from the previous month
- Check your blog to see if there are any articles that could be updated

3. To be done quarterly

- Review your website design and structure – can be it improved?
- Check graphics and images – should anything be updated?
- Review SEO and meta titles and descriptions to ensure they are as effective as possible
- Test and tweak popups, forms, and calls to action
- Review your workload for efficiencies to see if anything can be automated
- Test your website on all devices and browsers to see if it displays correctly
- Review advertising and marketing campaigns to see if anything needs to be changed or updated.
- Restore a previous version of the website to check your backup health

Task in Maintenance

- Scan for vulnerabilities
- Repairs and fixes
- Browser compatibility testing
- Software update
- Website backups
- Site speed
- Search engine optimization
- Analytics
- Functionality
- Website content

A woman with long brown hair and glasses, wearing a blue blazer, is holding a tablet. The background is a blurred office setting. The text "Thank You" is written in a large, black, cursive font across the center of the image.

Thank You