

Task 1: Research and Design Documentation

Glossary Terms

1. Web Server

A web server is simply a peculiar device which keeps websites. When you go to a web page such as MCAST the pages are sent by the web server to your browser so you can read them. It's sort of like a waiter is delivering food to you but instead the web server is delivering websites to your screen.

2. Web Hosting

Web hosting simply refers to a service or rather, a hosting of websites on the internet. It stores all the files of the websites. To give you an example, the site of MCAST must be hosted in such a way that we are able to access the site 24/7. The site is not going to be online without a web hosting.

3. IP Address

Each computer or web page on the internet also contains a special number (192.168.1.1, etc.), which is an IP address. It is similar to the home address of the site. MCAST also has one but we do not really notice it since we use the domain name to visit the site.

4. Domain Name

That is the name of the site over which we enter in the browser. In case of MCAST, the domain name is mcast.edu.mt. It is much easier to remember than a long IP Address, this can be compared to associating a name to a contact number.

5. DNS (Domain Name System)

DNS acts as a phone book of the internet. The DNS identifies the right IP address when a domain such as mcast.edu.mt is typed; it then gives us a connection to the page. In absence of DNS we would need to memorize numbers instead of names.

6. HTTP/ HTTPS

HTTP is the method through which websites transmit as well as receive information. HTTPS uses the encryption of data where the "S" means Secure, which means your connection is safe. The site of MCAST has HTTPS use, which ensures that whatever we perform on the site (such as visiting it or logging in) is safe.

7. SSL/TLS Certificate

This is what makes a web site have the smaller padlock (🔒) to the side of the browser. It ensures the site is secure since it ciphers the data. It has one at MCAST and that is why whatever we enter and type in (our details or our applications) is saved in a secret and safe place.

Internet Services

1. Content Delivery Network (CDN)

Function:

CDN refers to a system of servers located across the globe and used to serve the content of a certain website in the fastest and most efficient way simulating the use of the nearest server to the final listener. This implies that things like image, videos, and fonts can be loaded faster.

Benefits to the users / admins:

To a user, it translates to faster loading time, which can be very useful to a student who wants to access a key page within a short amount of time, such as course listings or announcement pages. To the admins, it saves the heavy load on the primary server and enhances the overall performance.

One of the Improvements:

MCAST could improve its CDN by ensuring that all the essential files (such as pictures, videos, and documents) are processed using the CDN. This would facilitate even faster loading of the site even to the students, especially when there is mass usage on it.

2. Simple Mail Transfer Protocol (SMTP)

Function:

The protocol of sending emails is SMTP. It must be used on the website of MCAST, to drive aspects such as the Contact Us form or any automated emails that are generated when people either sign up or when they enter a form somewhere.

User/Admin Value:

Users benefit from receiving receipt, confirmation emails or responses. Communication is efficiently administered by admins especially when it comes to admissions, support and updating.

One Step Better:

Once MCAST sends emails, such as the email through the contact form, or confirmation emails, the relayed email must demonstrate that it is sent by a reliable party. If not email services (such as Gmail or Outlook) will consider them to be spam. To fix email delivery, MCAST might choose to use SPF/DKIM email authentication or they can use managed email service (such as SendGrid or Outlook SMTP) that provides even more reliability and protection against spam.