**Domains**

* Domain network is a network that has a server(s) dedicated for the security of the network.
* A domain controller is responsible for sharing and security in a network.It can be installed/activated on any computer on the network and that computer will become a server since it is providing a service. Microsoft packs all services in one product called Windows Server otherwise it is called authentication and security server (in linux called SAMBHA).
* When a computer is added to the list in domain controller it becomes a part of the domain. Now whenever that computer is accessed credentials are passed to the domain controller. If the credentials are correct the domain controller returns an access control key that indicates the permissions/security policies the user has on the system.
* Domain Names – a symbolic string associated with an IP address. It is a part of the URL. The domain name parts in a URL are Top Level Domain (TLD) and Second Level Domain (SLD). Everything after the domain name is used to identify the location of specific content within a site.
* TLD can be of two types- Generic TLDs(com, org, edu) or Country TLDs (uk in au)

**DNS**

Let us first understand what DNS means for a normal network (generally any network), not specific Internet. How DNS is implemented and how it works in INTERNET will be discussed later.

* DNS is the service (often interchanged with the server providing this service) that maps domain names to IP addresses. The other way round is called reverse DNS. It is done to check that if we are being directed to the right IP by the domain name.
* DHCP is separate service. They may or may not be housed on the same server but DNS and DHCP are separate services. In home and local networks (small business and offices) DNS and DHCP service may be present in the router. On enterprise level working with DNS means dealing with Microsoft DNS or UNIX/LINUX Bind servers.
* Dynamic DNS is a modern service where the DHCP informs the DNS when it assigns an IP.
* HOST file - Local DNS- Public DNS of Local DNS – primary /secondary DNS
* Difference b/w Hosting, DNS and Domain Registrars

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| **Hosting** | **DNS** | Domain **Registrars** |
| Website hosting provides server storage space and an IP address for your website. | DNS is the glue that makes the web work. It translates a name (www.InterlinkSpokane.com) to an IP address that tells which web server is hosting the website. It also tells other email servers where to send email for a domain name using what is called the MX record. | Domain registrars register a domain and enable it’s use on the rest of the internet. There is an annual recurring cost for this service. The one and only thing this service actually provides is to tell the rest of the web which DNS server to use for your domain. |

**Internet DNS**