How DNS work?

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Hello Everyone,

I will explain how DNS works in this topic. It has 2 things

1. What happens when you buy a domain.
2. What happen when you enter a domain name in the browser.

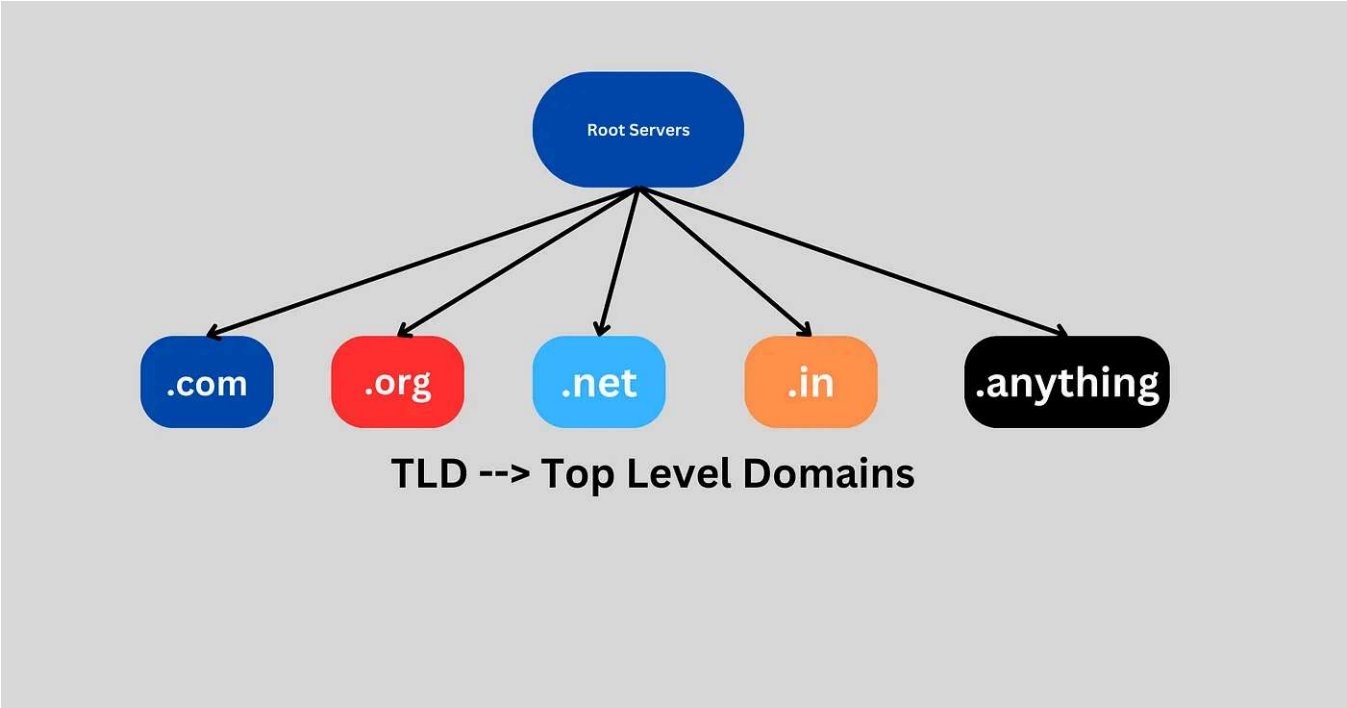
ICANN

ICANN, which stands for the **Internet Corporation for Assigned Names and Numbers**, is a nonprofit organization responsible for coordinating and overseeing various critical aspects of the global internet's unique identifiers. These identifiers include domain names, IP addresses, and protocol parameters that are essential for the functioning of the internet. Many countries and reputed organizations are part of this organization.

ICANN has 13 locations where they maintain the root servers infra. while ICANN doesn't maintain a comprehensive dictionary of domain names or nameservers, it plays a pivotal role in establishing the rules, policies, and technical standards that govern domain names and the DNS.

in conclusion ICANN has the information of TLD(top level domain) registries. Reputed companies manage these registries.

For example, Verisign manages the authoritative nameservers for the .com and .net TLDs



What happens when you buy a domain?

There are lot of domain name providers like Godaddy, Namecheap, Hostinger, etc. We can buy domain from any provider.

Hostinger is the cheapest domain registrar or provider. I use to purchase cheapest domain for our DevOps with AWS training from Hostinger.

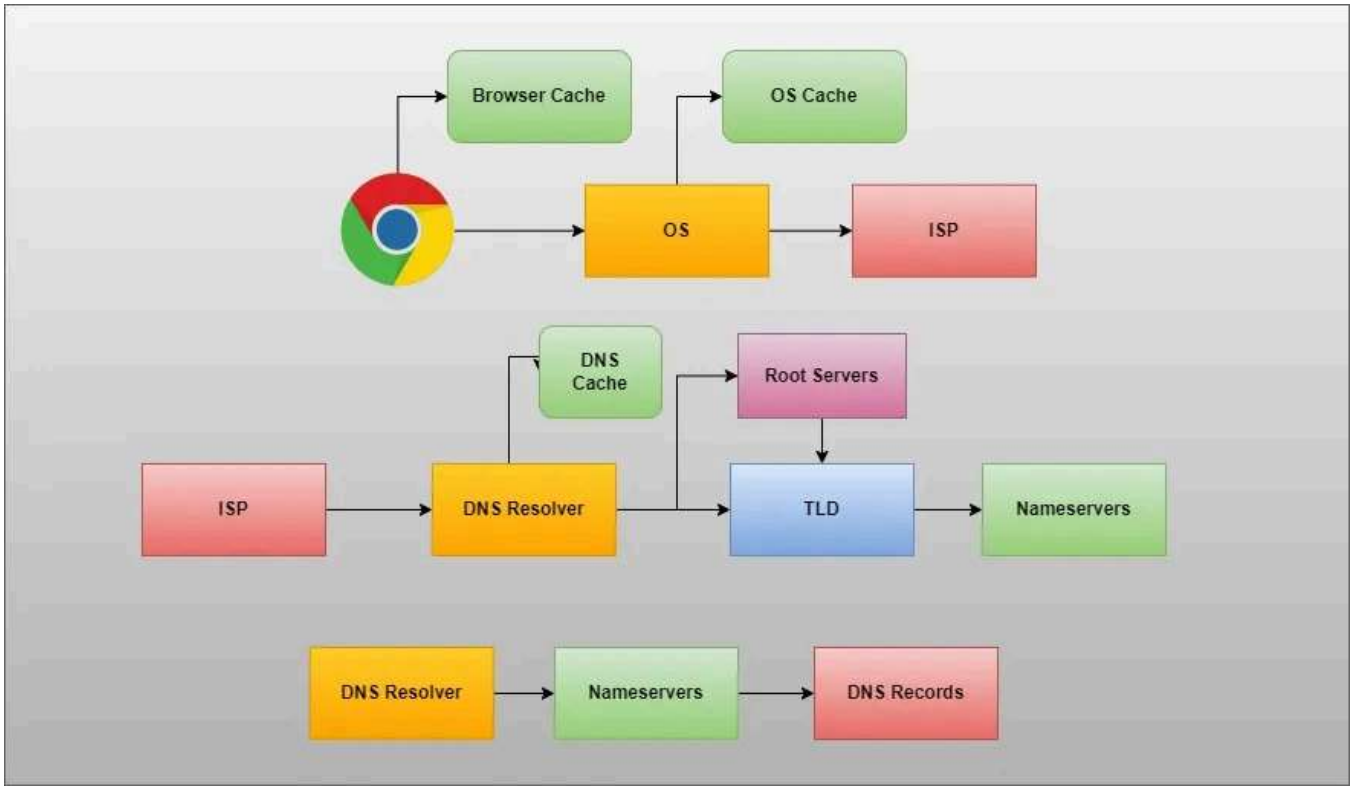
Once you fill the details and pay the amount, hostinger update the domain name and respective name servers to TLD registrars.

Radix is responsible for setting the registration policies, pricing, and operational procedures for the **.online TLD.**

I bought a domain **joindevops.online** from Hostinger. Once I complete the domain registration immediately Hostinger updates the domain name and name servers to

1. First, browser check its cache for the IP address, it is not available
2. Now browser contacts OS for IP, OS check its cache, if it is not availble there, OS contacts ISP.
3. DNS resolver is the component from ISP that is responsbile to get the IP address for a domain.

4. DNS resolver check its cache, then it is configured to contact root servers.
5. Root servers scans the domain, based on its TLD it will give the registry details of the domain.
6. DNS resolver approaches TLD registry, asking for IP address.
7. TLD registry gives the respective nameservers.
8. DNS resolver approaches nameservers to fetch IP address configured for the domain.

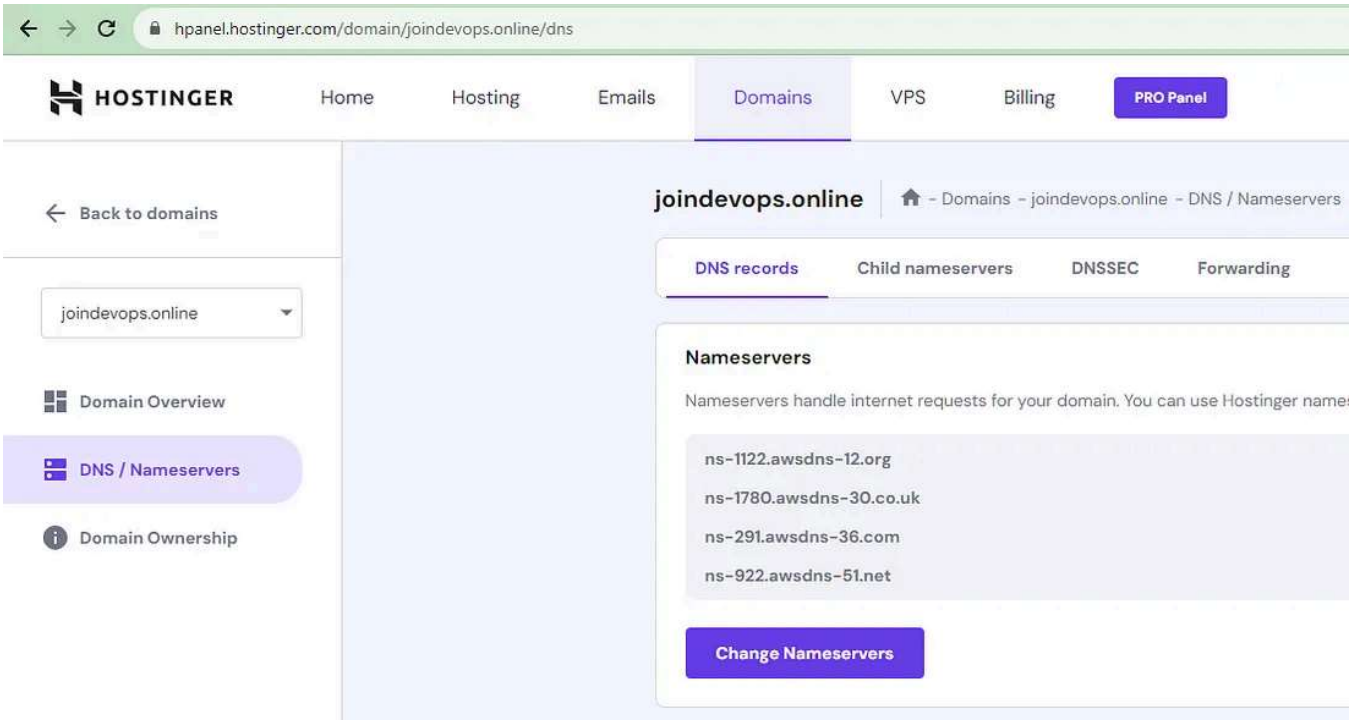


How to transfer domain control from Hostinger to AWS?

Why I buy domain from Hostinger is because of cheapest rate. Why I transfer control to AWS is for less latency and automation. When your entire infra is in AWS it is best choice to have domain control also with AWS for automatic record creation.

Route53 is the AWS DNS service to register and manage the domains.

1. Create public hosted zone in AWS Route53. name should be your domain name. For example **joindevops.com**
2. We will get 4 Nameservers, we need to update these nameservers in Hostinger website.



3. Update the nameservers from AWS to Hostinger.

4. Usually it takes 1–24hr to update the nameservers information into TLD registry.

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