



Understanding Domain Linking to Hosting Servers via DNS



This research is dedicated to junior developers and cloud practitioners

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Hello! I am Derradji Amine Abdelbasset. I am an ICT student, a Cloud Service Associate, and a Junior Web Developer.

In this research, I tried to give a clear overview of the DNS service and how developers can link their websites to it through different hosting scenarios.

you can visit my website for more informations about me through this link :
www.derradjiamine.me

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1/ Overview about DNS

The DNS (Domain Name System) is an important part of the Internet. It helps turn website names, like www.derradjiamine.me into numbers called IP addresses that computers can understand.

Developers use DNS to connect their websites to a public domain so visitors don't have to remember a long numbers to write it in the search bar they just have to give a specific name and browser will get the right address . DNS service basically designed to manage website addresses, emails, and redirects. This makes it very useful for both users and developers.

2/ DNS records types :

after applying for domain name , you as a developer has to link it into your project and to do that you have to configure a DNS record .

DNS record is a log we configure it in the DNS provider platform , it consist of a type, host value and a ip address .

first type of DNS records is **A record** (address record) , we link our domain directly through it using the public ip address of the server which hold our website , configuration of this record be like that : type : A , host : @ (which indic for the root part of our domain "derradjiamine.me") , ip : public ip .

second type of records is **CNAME record** which link our domain to our project using another middle domain usually linked into the public ip to the server , this method provides more security and isolation , it takes :

type : cname , host : www, and specific ip

also there are other types like **TXT record** which designed to ensure domain property and set some policies like protection , it takes :

type : TXT , host : @ , ip : specific txt formed by specific services operators

3/ linking a website to a domain :

linking a website to a domain name depends on host scenarios but in several cases we have to be familiar with the public ip address of the server that we deploy our website into it . at the provider level we should book a domain name , after that select our domain in Advanced DNS in DNS list , click on manage then configure the records using your public ip as we mentionned before

3/ Host providers & DNS linking :

In several cases, developers deploy their websites into host platforms like github or vercel , it's enough to get the public ip of host server and link it in the DNS providers.

Github provide more then one public ip to use them in "a records" to ensure availbility and protection and ofcourse due to balancing process of traffic requests , vercel give one per project .

To get in touch with those keys -IPs- you must visit the pages' part in your project's settings .

5/ Cloud servers & DNS providers :

for cloud practitioners , after launch the cloud server you must select a EIP or public ip for the server , but usually we use elastic ip because it is easy to reallocate it in problem .

It's enough to use this EIP to initialitate and configure an " a record" .

To get the EIP address you must check the ECS page , just be noticed that we can use the normal public ip of the cloud server to link the domain but it's not ideal in problems cases