Understanding Domain Name System (DNS) Records

SUPPORT GUIDE
ABOUT THIS GUIDE

This document provides information about Domain Name System (DNS) records and how they are used and modified. You may find it helpful to look at your website’s DNS zone in your ISP’s online control panel while reviewing the contents.

About DNS

DNS is used across the Internet in a similar manner as a telephone directory. Using an internet browser (e.g., Internet Explorer, Firefox, Safari, etc.), you can search for an entity by typing a domain name into the address bar and hitting the ‘enter’ key.

For example, if you type ‘www.tagadab.com’ into the address bar and hit ‘enter’, your browser will go through the following steps:

1. It sees that the domain name ends in ‘.com’ and goes to the registry for ‘.com’ domains
2. It looks up ‘tagadab.com’ in the registry and finds the address of the name servers listed for that domain
3. It queries those name servers for an IP address associated with ‘www.tagadab.com’
4. After receiving the correct IP address, the browser takes you to that page

Tagadab customers often purchase domain names separately from other packages and later want to associate them with either a hosting package or a dedicated server. Others have domain names with third-party registrars who do not want to transfer the domains. In both cases, customers will need to edit DNS settings for the domains to work with their Tagadab products, making knowledge of DNS records and how to edit them essential.

DNS Records

DNS records consist of several elements. Each element needs to be correct for the DNS record as a whole to function correctly. They include:

<table>
<thead>
<tr>
<th>Hostname</th>
<th>Type</th>
<th>Content</th>
<th>Time To Live (TTL):</th>
</tr>
</thead>
<tbody>
<tr>
<td>www</td>
<td>A</td>
<td>195.8.66.210</td>
<td>400</td>
</tr>
</tbody>
</table>

Hostname

This is a domain name label that points to a server. For example, ‘tagadab.com’ or ‘www.tagadab.com’ would point to a server on the IP address 78.40.32.131.

When entering a DNS record, you can normally omit everything from the first ‘.’ onwards in the domain name as the DNS server automatically fills in this information. For example, a hostname of ‘www’ in the DNS zone of the domain ‘tagadab.com’ will be read as ‘www.tagadab.com’.

The hostname of a DNS record defines where traffic for that hostname will be directed. Legal characters for hostnames are letters ‘a-z’, numbers ‘0-9’ and ‘-’. Hostnames cannot start or end with ‘-’ and must be between 1-63 characters long.
Type

There are several types of DNS records, but Tagadab uses only the three most common ones. They are ‘A’, ‘CNAME’ and ‘MX’ records. Each has different uses that are covered below:

- **‘A’ Records**

  ‘A’ records are the most common DNS record. They translate domain names like www.tagadab.com into the IP addresses used by computers. A typical ‘A’ record would be:

  ```
  www   A   195.8.66.210   400
  ```

  This would direct all traffic for the hostname www.<your domain> to the IP address 195.8.66.210.

- **‘CNAME’ Records**

  ‘CNAME’ (or canonical name) records are also common, but tend not to be used as often as ‘A’ records. Instead of translating a DNS name to an IP address, they translate to another DNS name that has to be translated again to resolve an IP address. An example of a CNAME record would be:

  ```
  www   CNAME   host-vh.tagadab.com.   400
  ```

  In this record, the content ‘host-vh.tagadab.com.’ has an appended ‘.’. This is important as the DNS software would read the content as ‘host-vh.tagadab.com.<your domain>’ without it in the same way it reads the ‘www’ hostname as ‘www.<your domain>’.

- **‘MX’ Records**

  ‘MX’ (or Mail eXchange) records are used to define the mail servers that are used by a domain. You can have one or more MX records with each pointing to a different mail server. The order in which mail will be delivered to those servers is determined by the *priority* of the MX records. Priority is an additional element of the MX DNS record and a positive integer. The lower this number, the higher the priority assigned to that mail server. An example of two MX records for a domain would be:

  ```
  @   MX   mx-vh01.tagadab.com.   5   400
  @   MX   mx-vh02.tagadab.com.   10  400
  ```

  In the above example, mail for the domain would be first delivered to mx-vh01.tagadab.com. If mail couldn’t be delivered to that mail server for some reason, it would then be delivered to mx-vh02. If this delivery failed, the sender would receive a bounce-back e-mail.

  Note that it is possible to have several MX records that have the same priority. In this case, each individual mail is delivered to a random server from the group of servers at the same priority. This allows you to create a rudimentary cluster.
Content

The content portion of a DNS record refers to the destination of the traffic to the hostname specified in the record. This is commonly an IP address (in the case of A records) but can be another domain name assuming the domain name is appended with a ‘.’.

Time to Live (TTL)

The TTL is a positive integer that represents a number of seconds. In a DNS record, the TTL specifies how long the record can be cached by your ISPs recursive name server. The value of a TTL in a record will determine how quickly any DNS changes you make will affect users across the Internet. For example, if the record you are changing has a high TTL (for example – 86400 or 24 hours), the changes will take a long time to propagate throughout the Internet.

Before making any DNS record changes, be sure to check the TTLs of your existing records. If they are over an hour (with a TTL value greater than 3600), reduce them to be between 400 and 3600. After 24 hours, make any further changes to your DNS records knowing that these changes will take effect relatively quickly.

Need Further Assistance?

Please e-mail us at support@tagadab.com or call us at 020 3697 5537 Monday through Friday from 8am to 6pm GMT.