Article Number: 77 | Rating: Unrated | Last Updated: Mon, Aug 7, 2017 at 2:52 PM

DNS Zone Management

is via the my.ic .uk portal https://my.ic.uk (https://my.ic.uk)

Within the portal go to Services and Domains, there you can add and edit the records which make your domain work. Here is an overview of the types of record you can add and what they do.

A Record

This assigns an IPv4 address to host names in this domain. Use A records for specifying the IP address of the www for your domain. Also mail servers point to an A record, see MX records.

- The IP address must be a valid IPv4 address.
- Root host names are permitted.
- An A record cannot have the same host name as a CNAME record.
- There can be multiple A records with the same host name.
- There can be multiple A records that point to the same IP address.
- There can be multiple A records with the same host name, this can be used for load balancing.

AAAA Record

This assigns an IPv6 address to host names in this domain. As per A records but for IPv6.

- The IP address must be a valid IPv6 address.
- Root host names are permitted.
- An AAAA record cannot have the same host name as CNAME record
- There can be multiple AAAA records with the same host name.
- There can be multiple AAAA records that point to the same IP address.
- There can be multiple AAAA records with the same host name, this can be used for load balancing.

CNAME Record

A CNAME is an alias of one host name to another host name. Use CNAME records to allow easier admin where, for example there are many separately named services on a single IP, use CNAMES to all point to a single A or AAAA records (or both).

- When looked up it will retry the lookup with the specified host name instead.
- The content must be a valid fully qualified host name, the new name must be resolvable.
- This is useful for cases when running multiple services on a single IP address, e.g. ftp.domain.co.uk and www.domain.co.uk may both be on the same machine.
- Root alias host names are not permitted.
- You can only have a single CNAME per alias host name.
- There can be multiple CNAME records that point to the same destination host name
- Host names with CNAME aliases set must have no other record types set.

MX Record

This maps a host name to a host name used by a mail server.

- Usually the setting is for the whole domain, known as a root host name where you can leave the host name box blank.
- Multiple MX records for the same host name allows more than one mail server to be set.
- The content must be a valid fully qualified host name.
- There can be multiple MX records with the same host name and priority, this can be used for load balancing.
- A numeric priority value sets the order of servers or sets of servers to try, lower being more preferred.
- MX records cannot point to a CNAME. They must point to A(AAA) records.

NS Record

NS records allow you to set a host name to be resolved by another name server.

- The other name server can then resolve that host name or any you might set under it.
- Root NS host names are not allowed, we are dealing with those for you and you can see them below.
- Multiple NS records with the same host name can be created as long as the content is different.

- NS records cannot point to a CNAME.
- Allows to add arbitrary text against a host name record.
- Root host names are allowed.
- Regularly used for such things as SPF, DKIM and domain verification information.

TXT Record

This is literally a text record; However, the most notable system to use this is for email protection and is called an SPF record for example an spf record for microsoft 365 would look something like this :

Record	Host	Content	TTL
TXT	mydomain.com	"v=spf1 include:spf.protection.outlook.com -all"	3600

SRV Record

SRV records allow you to specify the services on your domain.

- For example a _Service._Protocol formatted host name such as _sip._tcp where service is name for your service and then protocol (tcp , udp).
- A numeric priority values sets the order of servers or sets of servers to try, lower being more preferred.
- There can be multiple SRV records with the same host name and priority, this can be used for load balancing.
- The contents must include a weight, a port and fully qualified target host name.

Microsoft 365

in order to configure Microsoft 365, there are numerous DNS entries to add. IC's DNS management tool will allow you to add all the records in one hit. This is highly convenient and prevents mis-typoing of the records.

Warnings and overall control

When entering the DNS configuration tool, our system checks where the world thinks that the domain is hosted, If it is not IC's servers then we display a warning but you can happily edit the zone on our servers.

Warning ! - This domain name servers NOT pointed to our name servers

SOA Record

You can also control the portions of the SOA

- where you need to specify a working email address.
- You can change the TTL (Time to live) of your domain, this is how long the information read from the DNS servers will remain valid. If you are wanting to make changes then reduce the time down before the changes are ready to be made.

I need a copy of the whole DNS zone

You can export the entire contents of any of your DNS Zones. Within the zone below the current records is a link Export DNS. Click on this and name the file saved on your PC.

If, when you open the file, the text appears 'all in a jumble' on one line, then the issue is with the text viewer / editor which does not support unix style carriage returns. If this is an issue then use wordpad, editpad, notepad ++ or Word to see the file as it should be.

I need to see which records have changed and what they used to be.

Within the zone below the current records is a link View Change Log.

This shows add move and change data with who and when it was changed along with what it used to be.

For more information on DNS see wikipedia as it has detailed descriptions.

http://en.wikipedia.org/wiki/Domain_Name_System#Recursive_and_caching_name_server
(http://en.wikipedia.org/wiki/Domain_Name_System#Recursive_and_caching_name_server)

Posted by: Jonathan - Wed, Jul 26, 2017 at 5:16 PM. This article has been viewed 5154 times.

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