DNS BEST PRACTICES
Table of Contents

1. Introduction: What are Best Practices?
2. Getting Started with the Basics: What is DNS?
3. Why DNS is so Important
4. Best Practice #1: the Need for Speed
5. Best Practice #2: Anticipate System Failure
6. Best Practice #3: Beware of Dirty DNS Sales Tactics
7. Recap
8. About DNS Made Easy
What are Best Practices?

How long was your check list when you first started your company? We know you remember those sneaking suspicions constantly reminding you that you're still missing something important.

If you're reading this study, then you must be considering the benefits of outsourcing your DNS to an expert provider. Keep in mind that these features and services we discuss are exclusive to top tier providers. While DNS might not be at the top of your list, having a reliable DNS provider means the difference between staying online and losing your hard earned revenue. We'll help you weigh the pros and cons of a reliable DNS provider versus a free service in regards to speed, security and costliness.

When a website goes down, potential customers will get dropped or denied access. If you make the wrong decisions when choosing a DNS provider, you could see your revenue plummet before you can scream "DNS!"

If your business values 100% reliability, integrity, and industry leading performance; then you need a DNS provider who has upheld these ideals for over 14 years...

The experts at DNS Made Easy offer some tips for DNS Best Practices when evaluating a DNS Provider:

1. The Need for Speed
2. Prepare for the Worst
3. Beware of Dirty DNS
Getting Started with the Basics

What is DNS?

DNS is an abbreviation for **Domain Name System**. This system was created to translate the domain names of servers into IP addresses. It works like a phone book as it connects your IP address (phone number) to a website (name). This permits computers and networking devices a means of understanding one another.

This information is stored by a DNS Server, which provides the proper information to the requesting computer or networking device. DNS can also provide auxiliary services like authentication, verification, and configuration details of specific records.

Without DNS, the internet wouldn’t be able to function. Rather, we would have to manually type in the IP address of every website we wanted to visit.
Why DNS is So Important

For any company that uses the internet for sales, marketing, information, etc.; business continuity depends on fast initial load times and 100% site availability.

Everything on the Internet relies on DNS including: web, email, video, audio, texting, and more. This means that no matter how fast your Internet connectivity is, a site won't load unless the DNS server has performed the lookup successfully. Unreliable and poor performing DNS directly affect your entire Internet presence.

Cyber attacks are growing in frequency and can affect the bottom line for companies whether small or large, carrying risks like downtime and slowed speeds. DNS attacks, DDoS, and phishing attacks are very real threats to DNS networks not protected with IP Anycast+. These risks translate to lost revenue and discouraged customers if they aren't dealt with properly.

MISSION POSSIBLE
Network speeds are mission-critical in providing fast resolution times for customer domains. Low latency applications, such as DNS, are typically where delays occur in processing data.
Best Practice #1: The Need for Speed

**One second feels like a minute**

Online surfers are just one click away from abandoning a poor performing website and moving on to one that actually works, loads, and performs better. According to a study done by Aberdeen Research Group (The Performance of Web Applications), a one-second delay in DNS lookups leads to a 7% reduction in conversions, 11% fewer page views, and a 16% decrease in customer satisfaction.

Although one second doesn’t seem that long, more studies are starting to surface that now measure latency in milliseconds and if your DNS lookup is slower than the blink of an eye you could be losing users.
Size Might not Matter, but Speed Does

If your site isn’t up to par, it’s equivalent to hanging a “closed” sign on your door.

The speed at which a DNS server can resolve domain names into IP addresses depends on its geographic location among other factors. On an **IP Anycast+ network**, incoming DNS requests are sent to the closest DNS server geographically to the location of the client.

IP Anycast+ DNS providers have DNS servers located in different regions of the world. For example: DNS Made Easy has **Points of Presence (POP)** in sixteen different locations across the globe.

However, more POP’s does not mean more coverage or even faster speeds. Rather, you need to look at how strong the network is, what other features the provider has to help boost speeds and redundancy, uptime history, and reliability.
Best Practice #2: Anticipate System Failure

Murphy's Law: Bad things can happen

It is impossible to plan on a server or any piece of hardware to never fail. However, expecting failure and being prepared for a catastrophe is crucial in providing a valuable and reliable online service. Today's administrators need to plan on disaster recovery contingencies. Choosing the right DNS provider will help you sleep easy knowing your domains are ensured with years of uptime history and layers of redundancies.

A well thought disaster response plan offers a variety of customizable features tailored to fit your business needs whether large or small. These plans will investigate every possible issue or disaster and have readily available means of handling them all. These plans help prevent against DDoS attacks and DNS attacks with advanced firewalls, failover systems, round robin, and the global traffic director.

When DNS doomsday comes, make sure you’ve partnered with the right DNS provider.
Be Redundant

In business, redundancies can mean trouble; but with DNS, redundancies mean having a secure backup system.

DNS Made Easy’s **Automatic DNS Failover and System Monitoring** solutions can guarantee that as soon as a website, service, or internet connection is offline; all traffic will be automatically redirected to a secondary IP address, server, or provider which you have previously set up at another location. This provides assurance that your domains will always stay online.

Balance the Load with Round Robin

Global Load Balancing is a method used to spread web traffic to multiple servers based on their regional location. The web browser does a DNS lookup for the fully qualified domain name (FQDN), connects to the IP addresses based on the closest location determined by the AS path of the global routing tables. Splitting traffic using Round Robin at a regional level provides the highest level of performance and the best experience for the end user.

DNS Made Easy’s **Round Robin load balancing** is a creative way to use multiple systems with different IP addresses to lighten the server load and bandwidth requirements of hosted websites. This technique is particularly useful to companies whose websites get a very large number of hits and/or a large volume of bandwidth-consuming downloads. DNS Made Easy also supports **Weight Round Robin** which allows your to specify configured weights for each server depending on load capacity. This ensures that servers are handling only what they're able.
Best Practice #2: Beware of Dirty DNS Sales Tactics

We're Bringing Backend back

We aren't talking your literal derrière... but the back end infrastructure that supports an entire network. Most businesses are caught up with developing the front end – after all, it's the first impression people see. It's the sexy part of the information exchange. Dirty sales reps take advantage of this and will try to peddle their beautiful UI with neon colors and glowing testimonials...

STOP!

What does their back end look like? The UI you'll actually be using is hidden somewhere behind all that neon. Be weary of sleazy sales tactics that want to sell you temporary beauty, rather than reliable functionality.

Designers and developers spend hours, days, months or more creating the perfect online experience so users like you can rest easy knowing your site will always stay online (rather than worrying whether your cut-rate provider has an attractive color scheme).

Most users forget that the real meat of a DNS services happens in the back end. After all, the back end is what holds up the front end --a support system built on years of experience and customer feedback. All together, these two pieces must both be expertly crafted, providing the user with a seamless experience.
Recap

**Why Outsource Managed DNS?**

Website owners are often picky about what they need from their web hosts. However, picking the right DNS provider from the plethora of competing DNS hosts can be something of a head-scratcher.

Choosing the right DNS provider is an essential part of ensuring that your site provides the best experience for its users.

You see, at DNS Made Easy, we have created a business devoted entirely to offering DNS services. That’s right. We devote all of our time to DNS – this makes our product of the most superior quality, because it’s what we do!

DNS is not an afterthought or some sort of add-on with other internet features. When DNS becomes an afterthought, things like DNS outages happen.

Regardless of your company's size, make DNS a priority and make the right choice to outsource all of your DNS needs. All of DNS Made Easy systems are located at premium data facilities. From a network standpoint DNS Made Easy is in the top tier of DNS providers worldwide with a 14-year 100% uptime history, built on a 5th generation IP Anycast+ Network.

**DNS Made Easy conducted a survey** which revealed more companies are researching the differences between free registrar DNS, low quality DNS services, and enterprise tier IP Anycast+ DNS.

**More than 87% of these organizations** have chosen to use DNS Made Easy for its enterprise IP Anycast+ DNS based on overall uptime and superior resolution speeds that only DNS Made Easy can provide.
About DNS Made Easy

**DNS Made Easy** is a subsidiary of *Tiggee* LLC, and is a world leader in providing global IP Anycast+ enterprise DNS services. DNS Made Easy implemented the industry’s first triple independent Anycast+ cloud architecture for maximum DNS speed and DNS redundancy.

Originally launched in 2002, DNS Made Easy’s services have grown to manage hundreds of thousands of customer domains receiving more than 15 billion queries per day. Today, DNS Made Easy builds on a proud history of uptime and is the preferred DNS hosting choice for most major brands, especially companies that compare price and performance of enterprise IP Anycast alternatives.