*Thanks to DNS servers we surf the Internet using names such as www.sav25.com instead of impossible to remember IP addresses. DNS servers translate these domain names into machine readable IP addresses needed to locate the requested web-server on the Internet.*

## DNS Server
Part of your core network services

## Why host your own DNS?
Domain Protection and Control

## Which DNS to use?
Use Simple DNS or our Managed DNS Hosting

## Comparison
Compare our DNS solutions with your ISP's DNS

## Advantages of Simple DNS
How Simple DNS compares with Microsoft DNS and BIND

## RFC Compliance
Simple DNS is RFC compliant

# DNS Server
## Proof of Concept

# Introduction

DNS part of core network services

DNS is part of what we call as Core network services - the critical components of nearly every transaction that crosses the network. Without DNS, email and Internet browsing would not be Possible. More often than not , DNS is the most neglected critical services in network for the simple reason that almost all ISP are offering their DNS service for free.

The common reasons why some companies still use the free DNS offered by their ISP/Web Host:

1. Economic reason - its free and company don't incur additional cost for using it.
2. Frees the network administrator from maintaining additional server or service in the network,

***If you are serious about security of your network and of your domain, hosting your own DNS is the next step for you.***

# Why host your own DNS

Domain Protection and control

**Domain protection and full control of your network's core services are key reasons why you should host your own DNS server.** If your DNS servers are hosted with your ISP, they will not inform you if their DNS is down or not. Slow Internet access may also be due to DNS related problems. It is also possible that your network may only be relying on "Cached DNS" (stored in virtual memory of DNS server and the DNS server does not respond to new requests anymore).
**Using DNS, you can create your own SPF records to help fight spam and phishing scams in your email.** These are some of the things you may not be aware of. Other issues related to DNS are better explained through our FAQ below:

**What are the immediate benefits of having my own DNS in my network?**
Faster Internet access and create your own A records, MX records and even CNAME for web sites without asking your ISP to do it for you. Using Simple DNS, these are easy tasks you can implement. You can even create reverse zone for your IP's if your ISP will delegate the authority to you.

**Why is my ISP's DNS servers vulnerable to security attacks?**
The DNS servers of most ISP are designed to serve the domains and connections of all their customers and ***NOT just your domain***. It offers recursive and non-recursive requests to all their customers. If one of their customer's network or computers become compromised with malware or BOTS, the DNS server of your ISP will be one the primary target.

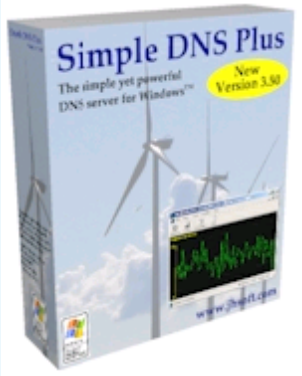
**Why would the BOT or malware target my ISP's DNS?**
The DNS servers hosts all the domains and includes data such as A records and MX records of all the domains. It is the heart of all Internet operations. It is also the most convenient way to ***retrieve valid domains to attack.*** Since the bot computer has access to the DNS of your ISP, it can try to access and retrieve data from the same DNS your are using. If it succeed in doing so, your domain will be one of the targets by the Bot.

**How could my network inherit the security vulnerabilities of my ISP's DNS?**
Once the Bot as explained above targets all the domains hosted in your ISP's DNS your network will be one of the recipients of the attack. The attack can be sent as spam mails or if you also host your own web site, denial of service attacks to your web site. and other Internet services you have.

**What are the security vulnerabilities in DNS?**
The most common DNS attacks are DNS Spoofing and port scanning. Simple DNS has integrated protection for this. Please see the section on Security features for details.

# Which DNS to use?

Use Simple DNS or our Managed DNS Hosting service




Simple DNS is the best option when selecting the DNS to use for your network. What makes Simple DNS Plus "simple" is its easy-to-use user interface and automation features. All options and settings are available directly from the intuitive Windows user interface. It provides wizards for common tasks such as setting up new zones, importing data, making bulk updates, etc. You never need to mess with cryptic configuration files or registry settings.
Novice users can have their DNS server up and running correctly and securely in no time.
*But make no mistake - Simple DNS Plus is a very capable and full featured DNS server, and it has plenty of options for expert users to tweak it just the way they want.*

We understand that not all organizations are capable of hosting their own servers. If you prefer to outsource your DNS but wants the same features and security as our Simple DNS software, our Fully managed DNS hosting services is right for you. You will get all the features of Simple DNS minus the administrative tasks. We'll manage the DNS for you!

# Comparison

Compare our DNS solutions with your ISP's DNS

Below is the comparison table to help you determine what type of DNS solution is right for your business.

| Features | Simple DNS | DNS Plus Hosting | ISP DNS |
|---|---|---|---|
| Serves only your domain | YES | YES | NO |
| Support SPF | YES | YES | NO |
| DNS Spoofing security | YES | YES | NO |
| Stealth DNS security | YES | YES | NO |
| Create your own DSBL | YES | YES | NO |
| Offers recursive request | YES | SOON | NO |
| With 2 secondary DNS | YES | YES | ? |
| *Secondary DNS in separate networks per RFC 2182 3.1 You must have nameservers at geographically and topologically dispersed locations. | Yes | Yes | No |
| Use DSBL of SAV25 | SOON | SOON | NO |
| Create own records | YES | YES | YES |
| RFC Compliant | YES | YES | ? |
| | | | |
| ***Our DNS servers are located in three separate networks - Philippines, New Jersey and Kansas City USA.** | | | |

# Advantages of Simple DNS

How Simple DNS compares with Microsoft DNS and BIND

| | Simple DNS Plus | Microsoft DNS | BIND |
|---|---|---|---|
| **Runs on non-Server Windows Versions.**<br>For example use Windows XP Professional., which provides the same reliability but is significantly less expensive than a Windows Server license. | Yes | No | Yes |
| **Easy to use GUI interface - forget cryptic DNS configuration files**<br>Simple DNS Plus provides an intuitive graphical interface for zone and record management.It automatically checks for and corrects most errors. | Yes | Yes | No |
| **Automatic SPF records - help fight spam and phishing scams**<br>Simple DNS Plus can now automatically synthesize SPF records for all local zones making it easy to setup and maintain SPF protection for your domains. For more on SPF see http://spf.pobox.com | Yes | No | No |
| **DNS Spoofing security option**<br>"DNS spoofing" is a term used for malicious cache poisoning where forged data is placed in the cache of DNS server. Spoofing attacks can result in serious security problems, for example causing users to be directed to wrong Internet sites or e-mail being routed to non-authorized mail servers. With the spoofing security option enabled, all records in received DNS answers are checked for authority, and records for which the answering DNS server does not have authority are ignored. | Yes | No | No |
| **"Stealth DNS" security option**<br>A hacker may use a software utility known as a "port scanner" to search for potential targets. This software sends dummy requests to a range of IP addresses on different service ports simply to register which addresses/ports respond. Any addresses/ports that responded will then be probed further for possible vulnerabilities. Simple DNS Plus has a special "stealth" option which makes it invisible to such port scanners, by not responding to a DNS request unless it is for data in local zones or originates from a client offered recursion. | Yes | No | No |
| **Restrict Recursion by client IP address**<br>You can specify exactly which clients (by IP address / subnet) that you want the server to perform recursion for. | Yes | No | Yes |
| **IP address blocking**<br>Ignore packets from known offenders, and automatically add anyone making too many requests to quickly (DOS attack) to the list.<br>You can specify how long an IP address block should be in effect, and you can enter comments for each block, for example about why an IP address was blocked or should not be blocked for easy reference. | Yes | No | No |
| **Quick Domain Wizard**<br>In one simple dialog, enter the domain name and the IP addresses of the web and mail servers, and click OK. That's all you need to setup a new zone. The IP addresses can even be pre-filled with default values. | Yes | No | No |
| **Bulk Update Wizard**<br>Find and replace an IP address in all local primary zones....<br>Update zone DNS server information in all local primary zones....<br>Promote secondary server to primary (convert all secondary zones to primary)... | Yes | No | No |
| **Copy zone function**<br>Quickly setup a new zone using any existing zone as a template. | Yes | Yes | No |

# Advantages of Simple DNS

How Simple DNS compares with Microsoft DNS and BIND

Powered by Simple DNS Plus

| | Simple DNS Plus | Microsoft DNS | BIND |
|---|---|---|---|
| **Reverse Zone Wizard**<br>Forget "in-addr.arpa" and reversing IP address segments. With the "Reverse Zone Wizard", you simply specify your IP address range and Simple DNS Plus automatically generates all the necessary records. It even supports "classless delegation" for those with less than 256 IP addresses. An "auto scan" function can scan all forward zones , A-records and automatically create matching reverse records. | Yes | No | No |
| **Integrated DHCP server auto configures network computers and DNS**<br>IP-addresses and other TCP/IP options can automatically be assigned to your network computers through DHCP. Client computers configured through DHCP are automatically registered as DNS records, so the rest of the network can easily locate them. There simply is no easier way to configure a DNS server - or TCP/IP settings on your network computers! Simple DNS Plus also has a unique feature fixing the "unknown DHCP client" problem often encountered with older Apple/Mac DHCP clients. | Yes | No | No |
| **Import Wizard**<br>This function makes it very simple to import zones from other DNS server implementations. This includes zone transfer, import zone file, and import set of zone files based on a boot file. | Yes | No | No |
| **"Zone Groups" for easy managements of large domain portfolios**<br>You can arrange zones in custom groups, or by primary/secondary status. | Yes | No | No |
| **Automatic creation of reverse DNS records**<br>Automatically create/update reverse DNS when an A-record is added or modified. | Yes | Yes | No |
| **Serve DNS records directly from your existing "hosts" file.**<br>Many users are already familiar with this file and it's layout, and many new users already have much of their network defined in such a file. | Yes | No | No |
| **Easy to integrate with other applications**<br>Simple DNS Plus can automatically check for and load new zone files (DNS record files) generated by other applications, and also includes a command line and TCP/IP interface for other applications to control loading and unloading of records. The included help file contains a complete description of these features. | Yes | No | No |
| **HTTP administration / programming interface**<br>Create a web interface to your DNS server for yourself or yours customers. This is ideal for communicating with Simple DNS Plus from other applications across the network (for example ASP scripts running on IIS). | Yes | No | No |
| **DNS Look Up tool - including WHOIS**<br>Great for testing your installation and troubleshooting all kinds of network problems. With the "WHOIS" feature, you can check the details (such as name, address and phone) on the owners of a domain name or IP address. The look up tool is a COM object, which makes it possible to call it from other applications, for example a selection context menu in Internet Explorer or a macro button in Outlook. | Yes | No | No |
| **See what's going on behind the scenes - live**<br>The Simple DNS Plus "Active Log View" shows who's requesting what, and how the answers are found in real time. Everything translated into human readable text. This is great for troubleshooting all kinds of network problems. If you are trying to learn how DNS works, this can be a real helper. | Yes | No | No |
| **Detailed log files**<br>Simple DNS Plus optionally writes all DNS queries and answers to a log file which you can then analyze at your convenience. | Yes | Yes | Yes |

# Advantages of Simple DNS

How Simple DNS compares with Microsoft DNS and BIND


| | Simple DNS Plus | Microsoft DNS | BIND |
|---|---|---|---|
| **Domain usage statistics**<br>With the raw log parser utility, you can create statistics for your own internal use or make it available on-line with bar charts etc. | Yes | No | No |
| **Cache snapshot viewer**<br>Browse the current DNS cache with this intuitive explorer style tool. | Yes | Yes | No |
| **Animated Tray Bar Icon.**<br>Simple DNS Plus optionally resides in the tray-bar (next to the clock), so it is out of the way, but always within a click's reach.<br>The Tray Bar Icon lights up whenever Simple DNS Plus is processing requests, so you will know even when the program is minimized. | Yes | No | No |
| **Automate secondary DNS servers**<br>A secondary Simple DNS Plus server can be configured as a "slave" server, meaning that all updates on the primary server are automatically transfered to the secondary. This includes creating and deleting zones. (On other DNS server, you have to create and delete zones on both primary and secondary servers).<br>Everything is completely automated - when changes are made in the Record Editor, Simple DNS Plus immediately notifies secondary servers and a Zone Transfer is initiated. Simple DNS Plus can also be configured as a standard secondary DNS server, and will then automatically check for updates on the primary server. As everything else in Simple DNS Plus, Zone Transfers are implemented according to the DNS standards (RFCs), and so it is 100% compatible with other standard DNS servers. | Yes | No | No |
| **NAT IP alias conversion**<br>In DNS responses to LAN clients only, this function changes A-records which are pointing to a public IP address of the NAT router to point to the corresponding private IP address of a local server. This way, for example HTTP requests from LAN clients for local web-sites will go directly to the local web-server instead of via the NAT router (which often does not work). | Yes | No | No |
| **"Round Robin" Load distribution option**<br>If you have multiple web servers (or other Internet servers), containing identical content, Simple DNS Plus can automatically distribute connection loads across the servers using Round Robin.<br>Round Robin works on a rotating basis in that one server IP address is handed out, then moves to the back of the list; the next server IP address is handed out, then it moves to the end of the list; and so on, depending on the number of servers being used. | Yes | Yes | Yes |
| **Support for dynamic updates**<br>Windows Me/2000/XP clients can automatically register themselves in the DNS database. (IP address permission list per zone). This includes support for SRV-records used by Microsoft Active Directory.<br>TSIG authenticated dynamic updates are also supported (used mostly by dynamic IP clients). | Yes | Yes | Yes |

# Advantages of Simple DNS

How Simple DNS compares with Microsoft DNS and BIND

Powered by Simple DNS Plus

| | Simple DNS Plus | Microsoft DNS | BIND |
|---|---|---|---|
| **Option to redirect abusers (synthesize DNS records for unauthorized users)**<br>When someone (unauthorized) from the Internet tries to resolve outside domain names via your DNS server, Simple DNS Plus can respond with synthesized (false) DNS records, for example to redirect that person to a signup web-page or similar. This feature is also useful when someone is incorrectly pointing their domain registration to your DNS server - for example an ISP customer who has canceled their account but not changed the domain registration. | Yes | No | No |
| **Supports wildcard records ( *.domain-name ) for ALL record types.**<br>If you are hosting many sub-domains on the same servers, this feature can be a real time saver. | Yes | No | Yes |
| **Alias zones (zone file sharing)**<br>Two or more zones can share the same data file making it very easy to manage a large number of zones based on the same data. Change one zone, and all the alias zones are instantly updated as well. | Yes | No | Yes |
| **NXDOMAIN Redirect**<br>Typically when you open a non-existing domain name in a web-browser, you either get an error page, or you are redirected to some search web-site controlled by the web-browser company (or DNS registry). This of course happens all the time because of misspellings and bad links on web-sites.<br>Now you can take advantage of those failed requests (from any client configured to use your DNS server) by redirecting them to your web-server instead of giving this traffic to the browser companies. | Yes | No | No |
| **Domain specific DNS forwarding**<br>You can use forwarding to different DNS servers for different domain names.This is helpful for example if you wish to be able to resolve both Internet domain names as well as a private domain | Yes | Yes | Yes |
| **Extended DNS forwarding**<br>You can use this unique option if you need to forward incoming requests from the Internet for certain domains names to another internal DNS server. | Yes | No | No |
| **Direct support for dynamic IP clients**<br>Simple DNS Plus supports TSIG authenticated dynamic DNS updates. This update method is much more efficient than the HTTP based and other proprietary update methods typically used because it happens directly via the DNS protocol.<br>Several dynamic IP updater applications can be used with this. Setup tutorials are provided for DynSite and DirectUpdate. | Yes | No | Yes |
| **MS Active Directory compatibility**<br>Simple DNS Plus supports both the required RFC2782 (SRV records) and RFC2136 (DNS Update), and integrates nicely with MS AD. | Yes | Yes | Yes |
| **Automatic detection of "lame delegation"**<br>"Lame delegation" is when the registration of a domain name points to a DNS server which does not have any data for the domain name.<br>Most other DNS servers will in this situation return a blank response to the client. But Simple DNS Plus recognizes the "lame delegation" and goes on to try the remaining registered DNS servers for the domain name. This means that Simple DNS Plus is more often successful in resolving problem domains, resulting in a better user experience. | Yes | No | No |

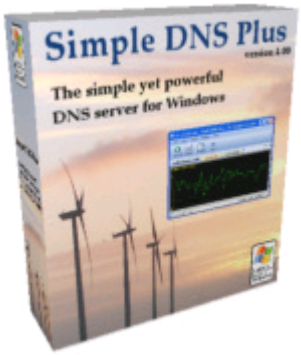
# RFC Standard

Our DNS services complies with RFC

Our DNS solutions based on Simple DNS technology are all RFC compliant. If your company is **ISO certified** or is **planning to get ISO certification**, RFC compliance should be one of your standard in DNS services.Complying with RFC standard also ensures that your Internet services meets the International standard.

RFC1034 Domain Names - Concepts and Facilities.
RFC1035 Domain Names - Implementation and Specification.
RFC1183 New DNS RR Definitions
RFC1706 DNS NSAP Resource Records
RFC1876 Location Information in the DNS (LOC)
RFC1912 Common DNS Operational and Configuration Errors
RFC1995 Incremental Zone Transfer in DNS
RFC1996 A Mechanism for Prompt Notification of Zone Changes (DNS NOTIFY)
RFC2136 Dynamic Updates in the Domain Name System (DNS UPDATE)
RFC2181 Clarifications to the DNS Specification
RFC2308 Negative Caching of DNS Queries (DNS NCACHE)
RFC2317 Classless IN-ADDR.ARPA delegation
RFC2671 Extension Mechanisms for DNS (EDNS0) (New in v. 5.0)
RFC2672 Non-Terminal DNS Name Redirection
RFC2782 A DNS RR for specifying the location of services (DNS SRV)
RFC2845 Secret Key Transaction Authentication for DNS (TSIG)
RFC2874 DNS Extensions to Support IPv6 Address Aggregation and Renumbering
RFC3403 Dynamic Delegation Discovery System (DDDS) (NAPTR records)
RFC3596 DNS Extensions to support IP version 6
RFC3597 Handling of Unknown DNS Resource Record (RR) Types (New in v. 5.0)
RFC4408 Sender Policy Framework (SPF) (New in v. 5.0)
draft-ietf-dnsop-default-local-zones Locally-served DNS Zones (New in v. 5.0)

RFC2131 Dynamic Host Configuration Protocol
RFC2132 DHCP Options and BOOTP Vendor Extensions




Simple DNS is exclusively
distributed in the Philippines
by

SAV25 Data Systems
7869 Mckinley Street
Makati City
Philippines 1230
Tel: (632) 893-2488
Fax: (123) 844-6626
info@sav25.com
www.sav25.com

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