

# DNS

## What does DNS mean?

The **Domain Name System (DNS)** is one of the most important services in the [Internet](#). The DNS is a shared [data base](#) that manages the name space in the Internet. DNS runs on port 53 by default.

DNS is mainly used for the conversion of [domain names](#) in [IP addresses](#) (forward lookup). This is comparable with a phone book that resolves the subscribers name to their phone number. So the DNS provides a simplification because for men it is far more easier to remember names than a row of numbers. DNS also enables a reverse resolving of IP addresses to names ([reverse lookup](#)). In analogy to the phone book this is equal to a search for a subscribers name to a known phone number (within the telecom sector this is known as [reverse telephone directory](#)).

Furthermore the DNS enables a decoupling from the underlying structure, e.g. changing the IP address without changing the domain name and even rudimentary [load balancing](#).

The DNS was conceived in 1983 by [Paul Mockapetris](#) and is described in [RFC 882](#). Since then the [RFC 882](#) has been replaced by [RFC 1034](#) and [RFC 1035](#). The DNS also superseded the *hosts* files that were used for the name resolution. *hosts* files are partially used parallel to the DNS due to their simplicity. DNS is characterized by:

- Decentralised management
- Hierarchic structuring of the name space in a tree form
- Definiteness of the names
- Expandability

Unique solution ID: #1298

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Last update: 2012-07-12 16:00