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 adresses (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 Since then the RFC 882 has been replaced by RFC 1034 and RFC 1035. The DNS also superseded the *hosts* files that were used for the name resolution.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

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