INSTITUTO FEDERAL
Rio Grande do Norte

DNS
REDES

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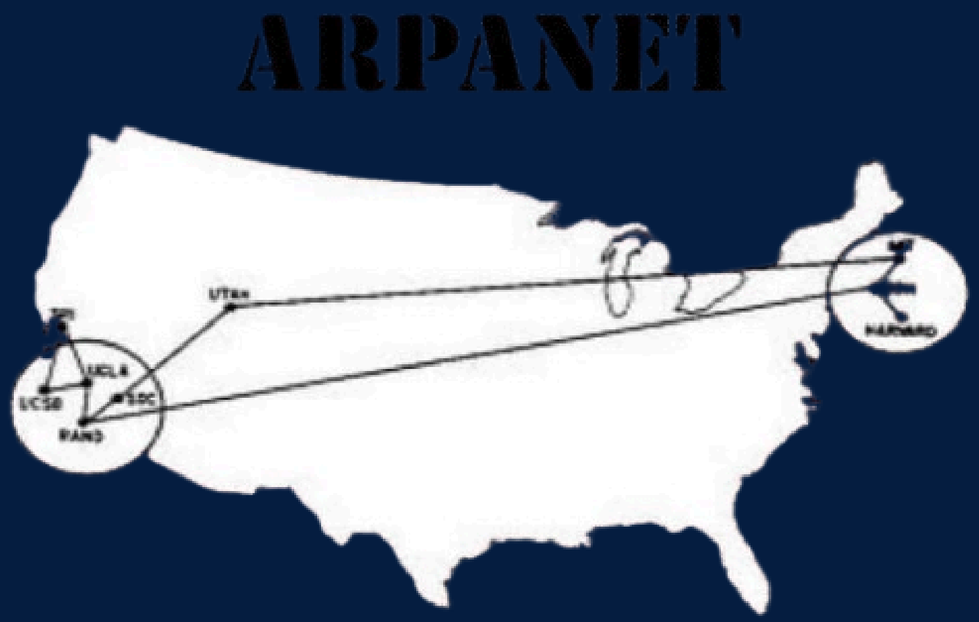
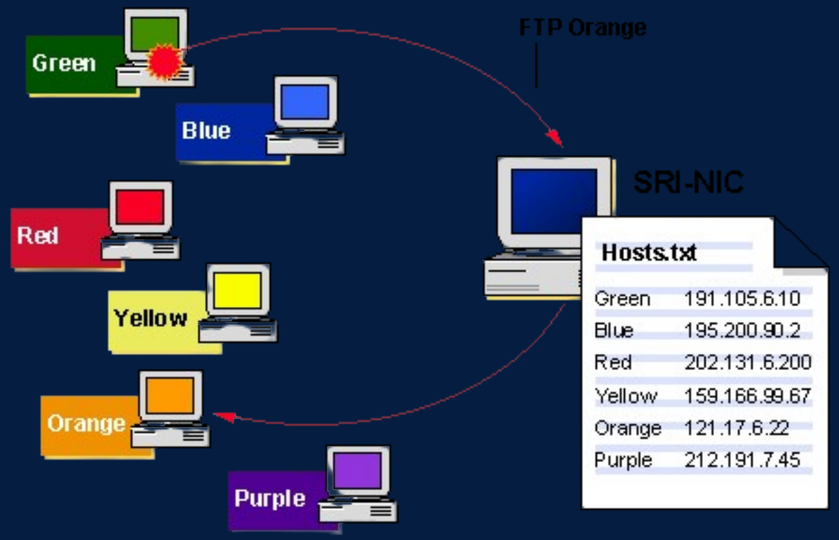
História e Contexto



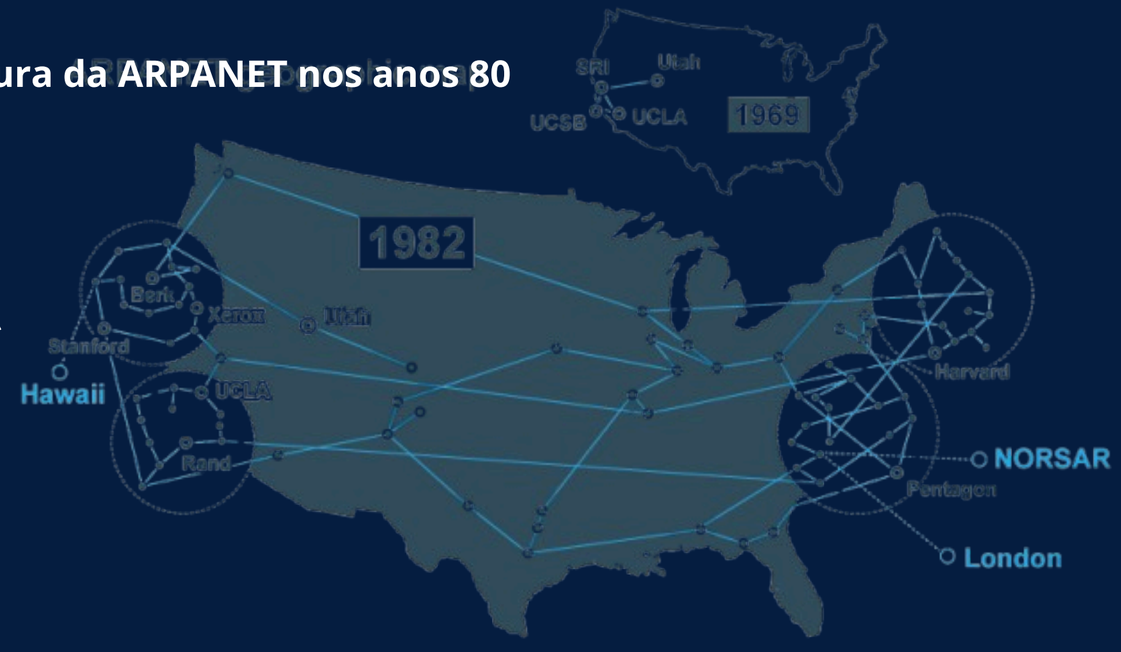
Estrutura da ARPANET no final dos anos 60

Metodo HOSTS.TXT

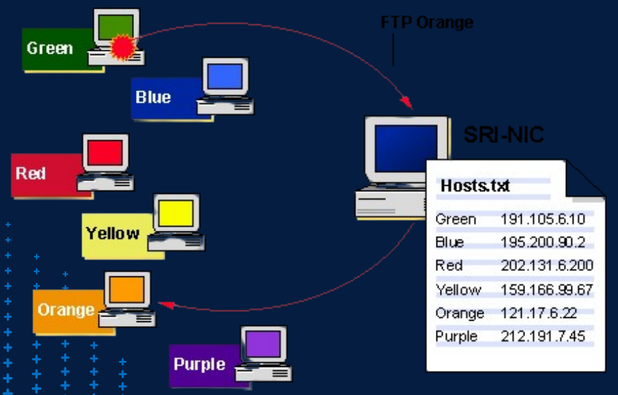


História e Contexto

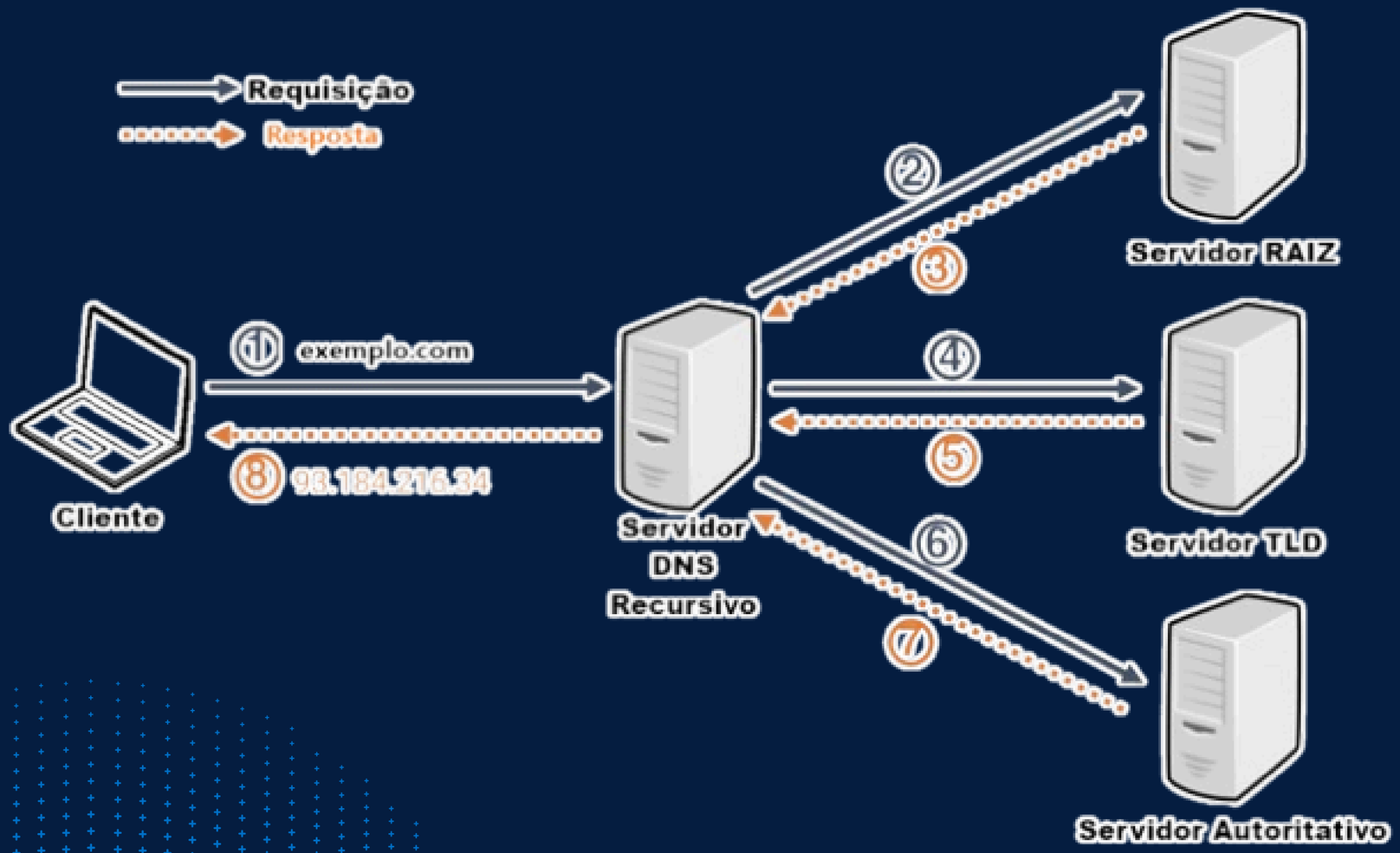
Estrutura da ARPANET nos anos 80



Método HOSTS.TXT se torna DNS



Estrutura geral



1. Cliente: Inicia a consulta para “exemplo.com”.

2. Servidor DNS Local: Verifica o cache. Se não encontrar, encaminha a consulta para fora.

3. Servidor Raiz: Recebe a consulta e encaminham para o servidor TLD apropriado.

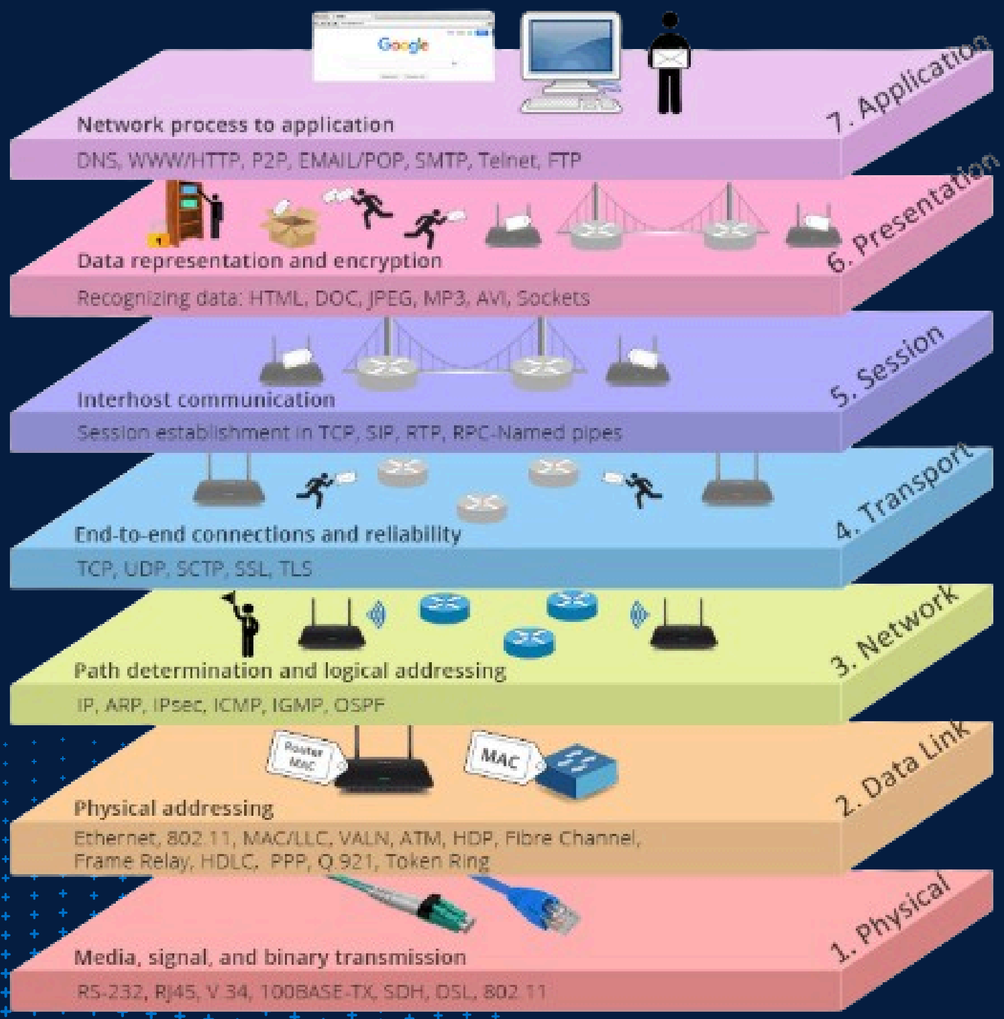
4. Servidor TLD: Identifica o servidor autoritativo para “exemplo.com”.

5. Servidor Autoritativo: Retorna o endereço IP correspondente.

6. Servidor DNS Local: Armazena a resolução em cache e retorna ao cliente.

7. Cliente: Usa o endereço IP para estabelecer conexões HTTP e TCP.

Estrutura



Embora o DNS opere na camada de aplicação, as mensagens DNS são transmitidas principalmente sobre o protocolo UDP na camada de transporte. O DNS geralmente usa a porta 53 para comunicação. Em algumas situações, especialmente quando a resposta é muito grande para caber em uma única mensagem UDP, ou para operações específicas como transferências de zona DNS (AXFR), o DNS pode usar o protocolo TCP, também na porta 53.

RFC 882 e 883

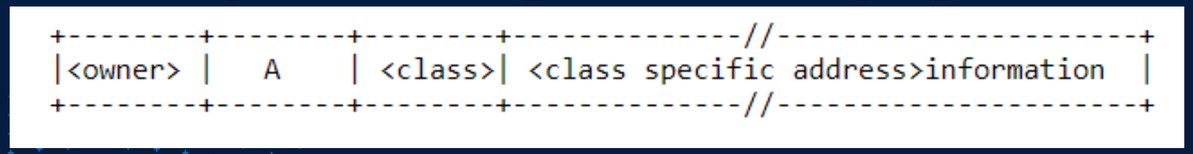
[RFC Home] [TEXT|PDF|HTML] [Tracker] [IPR] [Info page]

Obsoleted by: 1034, 1035 UNKNOWN
Updated by: 973
Network Working Group P. Mockapetris
Request for Comments: 883 ISI
November 1983

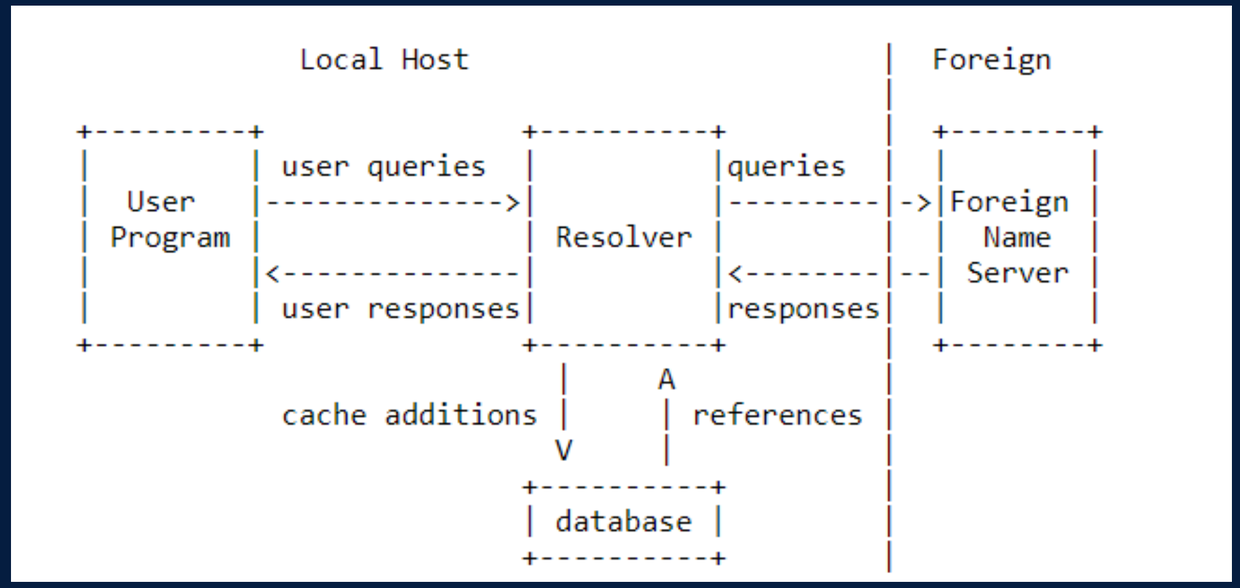
These problems have common characteristics that suggest the nature of any solution:

The basic need is for a consistent name space which will be used for referring to resources. In order to avoid the problems caused by ad hoc encodings, names should not contain addresses, routes, or similar information as part of the name.

Motivação e Design do DNS (páginas 2-4)



Componentes e Modelo de Dados DNS (páginas 4-6)



Implementação e Especificação (página 2)

RFC 1034 E 1035

[RFC Home] [TEXT|PDF|HTML] [Tracker] [IPR] [Errata] [Info page]

Updated by: 1101, 1183, 1348, 1876, 1982, 2065, 2181, 2308, 2535, 4033, 4034, 4035, 4343, 4035, 4592, 5936, 8020, 8482, 8767, 9471 — INTERNET STANDARD — Errata Exist

Network Working Group — P. Mockapetris
Request for Comments: 1034 — ISI
Obsoletes: RFCs 882, 883, 973 — November 1987

Página 1

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The domain system assumes that all data originates in master files scattered through the hosts that use the domain system. These master files are updated by local system administrators. Master files are text files that are read by a local name server, and hence become available through the name servers to users of the domain system. The user programs access name servers through standard programs called resolvers.

However, the domain system is intentionally extensible. Researchers are continuously proposing, implementing and experimenting with new data types, query types, classes, functions, etc. Thus while the components of the official protocol are expected to stay essentially unchanged and operate as a production service, experimental behavior should always be expected in extensions beyond the official protocol. Experimental or obsolete features are clearly marked in these RFCs, and such information should be used with caution.

3.6.2. Aliases and canonical names

In existing systems, hosts and other resources often have several names that identify the same resource. For example, the names C.ISI.EDU and USC-ISIC.ARPA both identify the same host. Similarly, in the case of mailboxes, many organizations provide many names that actually go to the same mailbox; for example Mockapetris@C.ISI.EDU, Mockapetris@B.ISI.EDU,

Página 14 Seção 3.6.2

Several other validity checks that should be performed in addition to insuring that the file is syntactically correct:

1. All RRs in the file should have the same class.
2. Exactly one SOA RR should be present at the top of the zone.
3. If delegations are present and glue information is required, it should be present.
4. Information present outside of the authoritative nodes in the zone should be glue information, rather than the result of an origin or similar error.

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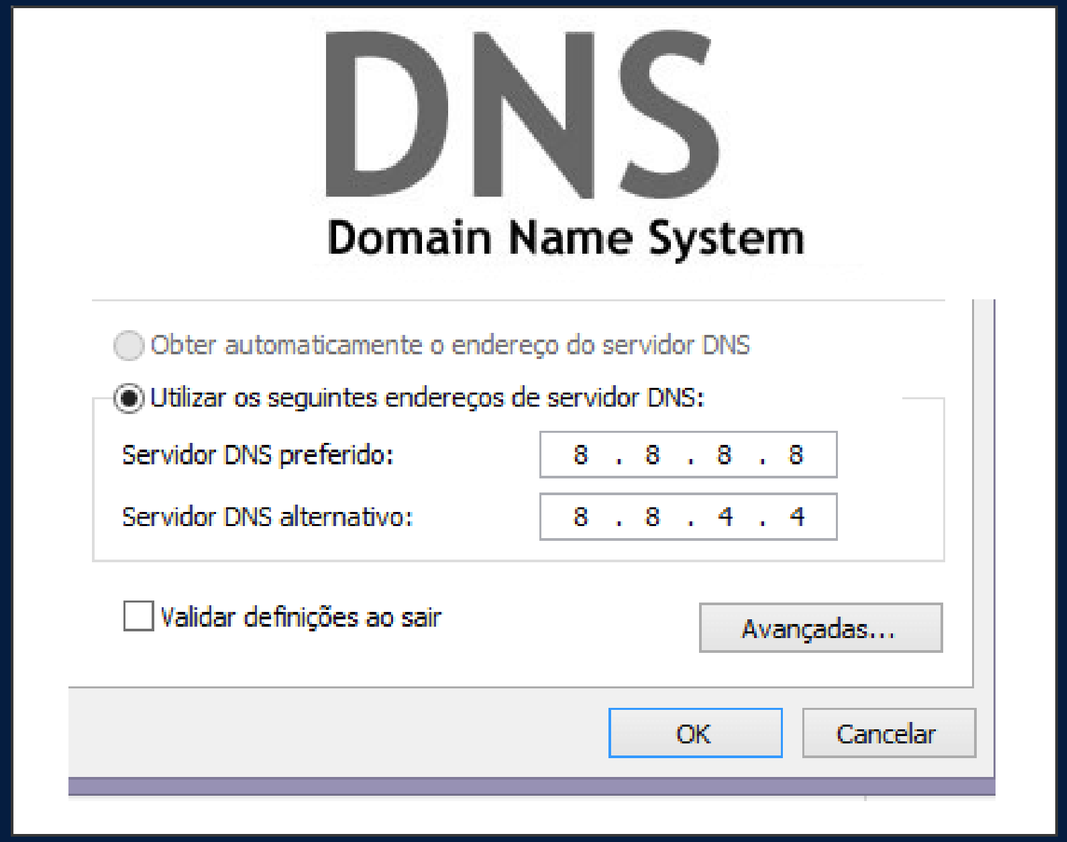

Muito obrigado pela atenção