Instructions Code Examples Forum Stage #TZ1 In-progress

Your Task In-progress MEDIUM

All communications in the DNS protocol are carried in a single format called a "message". Each message consists of 5 sections: header, question, answer, authority, and an additional space.

In this stage, we'll focus on the "header" section. We'll look at the other sections in later stages.

Header section structure

The header section of a DNS message contains the following fields: (we've also included the values that the tester expects in this stage)

Field	Size	Description
Packet Identifier (ID)	16 bits	A random ID assigned to query packets. Response packets must reply with the same ID. **Expected value**: 1234.
Query/Response Indicator (QR)	1 bit	1 for a reply packet, 0 for a question packet. **Expected value**: 1.
Operation Code (OPCODE)	4 bits	Specifies the kind of query in a message. **Expected value**: 0.
Authoritative Answer (AA)	1 bit	1 if the responding server "owns" the domain queried, i.e., it's authoritative. **Expected value**: 0.
Truncation (TC)	1 bit	1 if the message is larger than 512 bytes. Always 0 in UDP responses. **Expected value**: 0.
Recursion Desired (RD)	1 bit	Sender sets this to 1 if the server should recursive resolve this query, 0 otherwise.

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