

## Domain Name System

### DNS Message Format

0	8	16	24	31
identification		flags		
# of questions		# of answer RRs		
# of authority RRs		# of additional RRs		
...questions ...				
...answers (variable number) ...				
...authority (variable number) ...				
...additional information (variable number) ...				

### DNS Flags

Q	opcode	A	T	R	R	0	rcode
R		A	C	D	A		

### DNS Question

0	8	16	24	31
query name ...				
query type		query class		

### DNS Query Types

Name	Value	Description
A	1	IP address
NS	2	name server
CNAME	5	canonical name
PTR	12	pointer record
HINFO	13	host info
MX	15	mail exchange record
AXFR	252	req for zone transfer
* or ANY	255	req for all records

### DNS Resource Records

0	8	16	24	31
domain name ...				
type		class		
time-to-live				
resource data length		resource data ...		