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Networks: Attacks and Data Collisions

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| **B** | **Data Collisions** | |
| **Carrier-Sense Multiple Access with Collision Detection (CSMA/CD)** | | System of preventing data collisions on Ethernet. A combination of waiting until the segment is idle and detecting if a collision has occurred |
| **Cyclic Redundancy Check (CRC)** | | Error checking technique where a code is generated from the payload and sent in the trailer. The receiver generates the same code from the payload to make sure it is the same as the code in the trailer |
| **Data collision** | | When packets are sent over the same segment at the same time, in opposite directions. Data can become corrupted as packets try to pass through each other |
| **Duplex (communication)** | | Communication can be in either direction, so collisions are likely |
| **Half-duplex** | | Communication can be in either direction, but not at the same time |
| **Simplex** | | One directional communication for avoiding data collisions |

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| **A** | **Types of attack** | |
| **Active** | | A network attack where the hacker attempts to change data or introduce malware |
| **Backdoor** | | An access channel which is opened to outsiders without the users' knowledge |
| **Brute force** | | Hacking technique involving trying every possible combination of a password |
| **Data interception** | | Picking up data as it is being sent across networks |
| **Denial of Service (DoS)** | | An attack which aims to stop a server working by using up all its bandwidth |
| **Hacking** | | Accessing someone else's data without consent |
| **Insider** | | A network attack where someone within an organisation exploits their network access with malicious intent |
| **Packet sniffing** | | A form of data interception where packets are analysed as they are being sent |
| **Passive** | | A network attack where the hacker gains access to unauthorised information |
| **Pharming** | | Directing a user to a malicious website by an attack on the DNS server |
| **Phishing** | | Directing a user to a malicious website from a bogus email |
| **SQL injection** | | Malicious code (rather than data) which enters a system through a form field |