Freitag, 18.08.2017

Einführung in das Thema Netzwerke

Die folgenden Aufgaben und Fragen beziehen sich teilweise auf den Film:
"HowIPworks.mpg"

Aufgaben

- **Aufgabe 1**: Was versteht man unter einem **IP-Paket**?
- **Aufgabe 2**: Welche Aufgabe hat der **Router**?
- **Aufgabe 3**: Erkläre die Begriffe **LAN, WAN, WLAN**

  LAN: _____

  WAN: _____

  WLAN: _____

- **Aufgabe 4**: Was bedeutet **WWW**? Und: Wer ist **Mr. IP** ?

  WWW = _____

- **Aufgabe 5**: Welche Aufgabe hat der **Proxy-Server**?
- **Aufgabe 6**: Welchen Sinn hat eine **Firewall**, erkläre in diesem Zusammenhang auch den Begriff **Port** (Port 80, Port 25, Port 21)
  Vgl. im Browser **Extras → Einstellungen → Erweitert → Netzwerk → Einstellungen**

  Firewall: _____

  Port: _____

  Port 80: _____

  Port 25: _____

  Port 21: _____

- **Aufgabe 7**: Viele Internet-Protokolle werden durch sogenannte **RFC**'s beschrieben. Was bedeutet **RFC**?

  RFC = _____

- **Aufgabe 8**: In den RFC's gibt es die Sektion **FYI**. Für uns interessant: die "FYI on Questions and Answers". Finde heraus, was **FYI** bedeutet

  FYI = _____

- **Aufgabe 9**: In der FYI "on Questions and Answers" wird die Frage beantwortet, wie ein typischer Smiley aussieht! Finde die Antwort und halte sie hier fest:

  Ein typischer Smiley: _____

- **Aufgabe 10**: Lies den folgenden Text **How Does the Internet Work?** und finde heraus, aus welchem größerem Dokument der Text stammt.
  - Antwort

2.5. How Does the Internet Work?

Each of the activities mentioned in the section describing what one can do on the Internet requires that computers exchange information. Computers take turns sending and receiving information. When a computer is sending information, it is known as the "source"; when it is receiving information, it is known as the "destination." (The same computer can be both a source and destination at different times. This is especially clear when one thinks of sending and receiving e-mail.) Every computer on the Internet has a unique Internet "address" that identifies it from among the millions of computers. The Internet has specialized computers between the source and destination located at network inter-connection points. These computers are known as "routers." The routers understand how to use a computer's address to appropriately point information from one computer to another over the Internet. In an exchange of information the following occurs:

- The source finds the address of the destination.
- The source contacts the destination and says "hello".
- The destination responds back with a "hello" of its own.
- The source tells the destination that it has information to send.
- The destination tells the source that it is ready to receive the information.
- The source breaks the information into small pieces called packets and sends each packet on its way to the destination.
- The routers guide each packet to the destination.

- The destination takes the packets and puts them back together to form the information.
- The destination tells the source that it has received the information and asks the source if it has anything more to send.
- If the source says no, the destination will say "good bye" unless it has something to send back. If it does, it will break the information into packets and send them.
- Once both end users are done "talking", they say both say "good bye".

Clearly our simplified introduction to this section did not explain many steps in this process, such as how a computer discovers the address of another computer or how packets are divided and reassembled. Fortunately, these are specifics that people using the Internet never really need to deal with!

In der Quelle zum Text oben werden auch noch folgende Fragen beantwortet:

- **What is the Internet?**
- **What Can I do on the Internet?**
- **What is an Address?**
- **Are There Any Rules of Behavior on the Internet?**
- **Who Runs the Internet?**

Zudem gibt es dort einen **Glossary of Terms** (?). Noch eine letzte

- **Aufgabe**: Gibt es eine deutsche Übersetzung des obigen Dokumentes?

- Eine kleine **Hausaufgabe**: Was passiert eigentlich mit IP-Paketen, die nicht ankommen?
