

HTTP-QUSS

HTTP - AI | QUANTUM
SPEED AND SECURITY



February 14, 2022

FACT SHEET

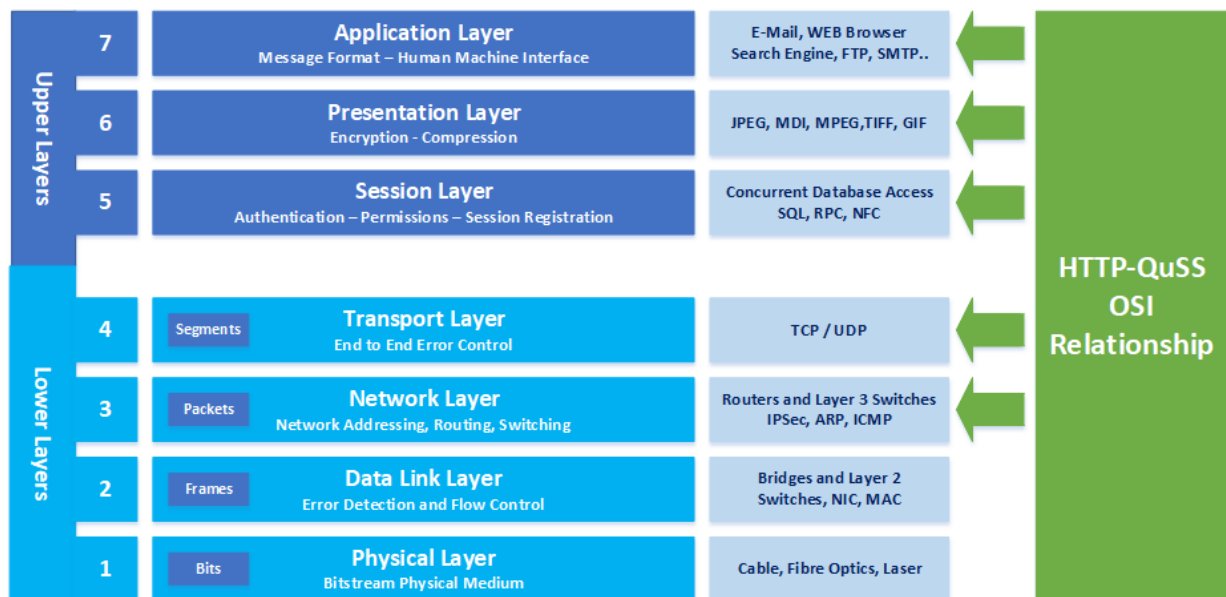


What is HTTP-QuSS

HTTP-QuSS is a **Cross-Layer Technology** which is not tied to a given Layer, but affects **Layer 3 - 7**. Some orthogonal Aspects, such as Management and Security, involve all of the Layers (See ITU-T X.800 Recommendation). The **HTTP-QuSS** Technology is aimed at improving the **CIA+S** Triad - **Confidentiality, Integrity, Availability** and additional **high Speed** - of the transmitted Data. This Cross-Layer Technology is very important because the Availability of a Communication Service is determined by the interaction between Network Design and Network Transmission Protocols.

Appropriate Choices for both of these are needed to protect against all Kinds of **Cyber Attacks**.

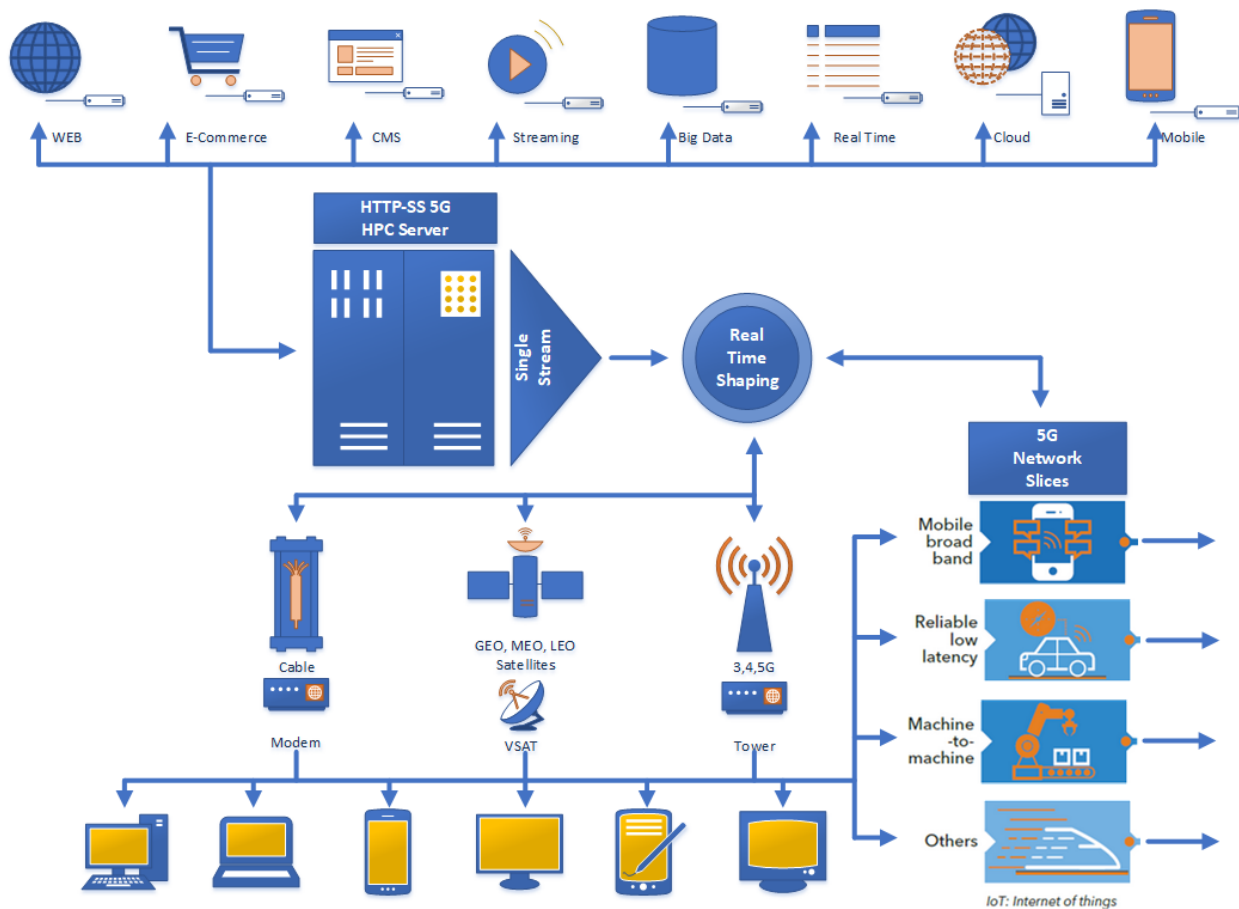
HTTP-QuSS affects the following OSI Layers:



HTTP-QuSS Architecture and newly designed **AI Process Chains** consists of **High-Performance Computing (HPC) AI Factories** or **Super Computers** and **lightweight** easy to install transparent **Clients** for all OS Platforms, Routers, Gateways and Modems.

- To open the Door for **Gbit/s Bandwidth** even within **high Latency Connections** the HTTP-QuSS Client Software can run in a parallel Hardware Client Environment (**SBC** or **SoC Semiconductor**) with many **GPU/CPU Cores** and demonstrating at the same Time a processing Energy Efficiency of a low **GFLOPS/Watt**.
- **HTTP-QuSS** supports in an ideal way upcoming **entangled QuBit Data Transmissions** in a **hybrid Network Environment**

- The **HTTP-QuSS Server** processes and transmits **URL/TCP Data Requests** from **WEB Browsers, Mobile Applications** and all other **TCP Clients** **securely** only with **1 Round Trip**
- All **Bandwidth** and **Performance destroying Protocol Handshakes** on short and long Distances are eliminated and at the same time a **secure Data Delivery** is guaranteed.
- **TCP Latency Issue** is **solved**.
 - ✓ No Matter of **RTT = 10 ms or 1 000 ms** and above
- **Huge Data Transmission Saving** by **AI Basic Elements**
 - ✓ **90 % less Data** for static and up to **50 %** for dynamic WEB Contents and up to **30 %** of any other TCP Data will be transmitted and therefor only a fractional of Bandwidth is needed to provide a similar performance as you would expect within a high Broadband Connection.

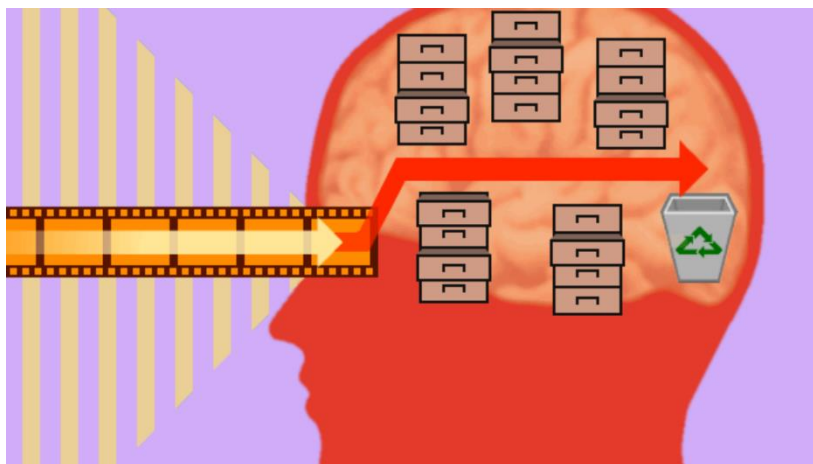


- **100 % redundant free Smart Push** of all WEB Objects by using **AI** Basic and **new server-side Process Chains**.

- **100 % compatible** to all common **Internet Standards** like IPv6/TCP/TLS/http and all other encapsulated TCP using Protocols.
- **100 % secure** Hack proof Data Transmission by **keyless 2 Level symmetric Encryption**.
- **100 % transparent System Integration**
 - ✓ **No upgrade** of Servers and End User Devices
 - ✓ **No upgrade** of active Network Elements
 - ✓ **Automatic HTTP-QuSS Routing** by **Proxy Auto-Configuration (PAC) Java Scripts** and the **Web Proxy Auto-Discovery Protocol (WPAD) Technology**
- **100 % Availability** through **Smart Fallback** to **State of the Art** Feature
- **Insensitive** against longer **Connection Interruptions**
- **Dynamic Realtime Bandwidth Shaping** through **own Linux Kernel**
 - ✓ **Floating** Bandwidth Assignment
 - ✓ **Fixed** Bandwidth Assignment
 - ✓ **Max available** Bandwidth Assignment
 - ✓ **Smart Ceiling** Bandwidth Assignment
 - ✓ **Fully Latency free** by using hashing Feature for direct Rule Addressing
- Integrated **Network Slicing** Feature to support the new Generation of **5G Mobile Networks** for:
 - ✓ **eMBB** - Enhanced mobile Broadband Access in Dense Areas
 - ✓ **s-VCC** - Small-Volume, critical Communications
 - ✓ **h-VCC** - High-Volume, critical Communications
 - ✓ **eRTC** - Extreme real-time Communications
 - ✓ **mIoT** - Massive Internet of Things

What is not HTTP-QuSS

- **No outdated Methods on OSI Transport Layer 4** used to achieve these results like:
 - ✓ **No TCP Spoofing**
 - ✓ **No Performance Enhancing Proxies (PEPs)**
 - ✓ **No Enhanced TCP Send and Receive Buffer Techniques**
 - ✓ **No Kinds of Network Accelerators**
 - ✓ **No Caching and Compression Features**
 - ✓ **No HTTP Header Compression**
 - ✓ **No Hardware intensive Bit Caching Systems**
 - ✓ **No new TCP by UDP**
 - ✓ **No additional RFC TCP Suggestions for Improvements**



- **HTTP-QuSS does not implement an own non Standard Protocol**
 - ✓ Moreover a **new Payload Structure** is used to follow the multiplexed Single Stream Data Transmission Requirements and all server- and client side Processes follow strictly all used Internet Standard Protocols
- **HTTP-QuSS is not** somekind of a **Proxy Caching Server**
 - ✓ Although Elements of a Forward Caching Proxies will be used, they do not play a crucial role in achieving these Results.