Related Articles

Network Protocols for web browser and servers are categorized into two types: Stateless Protocol, and Stateful protocol.

These two protocols are differentiated on the basis of the requirement of server or server-side software to save status or session information.

1. Stateless Protocol:
Stateless Protocols are the type of network protocols in which Client send request to the server and server response back according to current state. It does not require the server to retain session information or a status about each communicating partner for multiple request.

HTTP (Hypertext Transfer Protocol), UDP (User Datagram Protocol), DNS (Domain Name System) are the example of **Stateless Protocol**.

Silent features of Stateless Protocols:

- Stateless Protocol simplify the design of Server.
- The stateless protocol requires less resources because system do not need to keep track of the multiple link communications and the session details.
- In Stateless Protocol each information packet travel on it's own without reference to any other packet.
- Each communication in Stateless Protocol is discrete and unrelated to those that precedes or follow.

2. Stateful Protocol:

In Stateful Protocol If client send a request to the server then it expects some kind of response, if it does not get any response then it resend the request. FTP (File Transfer Protocol), Telnet are the example of **Stateful Protocol**.

Silent features of Stateful Protocol:

- Stateful Protocols provide better performance to the client by keeping track of the connection information.
- Stateful Application require Backing storage.
- Stateful request are always dependent on the server-side state.
- TCP session follow stateful protocol because both systems maintain information about the session itself during its life.

Comparisons between Stateless and Stateful Protocol:

Stateless Protocol	Stateful Protocol

Stateless Protocol	Stateful Protocol
Stateless Protocol does not require the server to retain the server information or session details.	Stateful Protocol require server to save the status and session information.
In Stateless Protocol, there is no tight dependency between server and client.	In Stateful protocol, there is tight dependency between server and client
The Stateless protocol design simplify the server design.	The Stateful protocol design makes the design of server very complex and heavy.
Stateless Protocols works better at the time of crash because there is no state that must be restored, a failed server can simply restart after a crash.	Stateful Protocol does not work better at the time of crash because stateful server have to keep the information of the status and session details of the internal states.
Stateless Protocols handle the transaction very fastly.	Stateful Protocols handle the transaction very slowly.
Stateless Protocols are easy to implement in Internet.	Stateful protocols are logically heavy to implement in Internet.

Previous Next

RECOMMENDED ARTICLES

Page : 1 2 3

01 Difference between Stop and Wait protocol and Sliding Window protocol
17, May 19

02 Difference between File Transfer Protocol (FTP) and Secure File Transfer Protocol (SFTP)
20, May 19

03 Difference between Serial Line Internet Protocol (SLIP) and Point-to-Point Protocol (PPP)
27, May 19

04 Difference between Border Gateway Protocol (BGP) and Routing Information Protocol (RIP)
18, Jul 20

05 Hot Standby Router Protocol (HSRP) and Virtual Router Redundancy Protocol (VRRP)
21, Mar 18

06 Cisco Discovery Protocol (CDP) and Link Layer Discovery Protocol (LLDP) in Data Link Layer
27, Aug 19

07 Difference Between Go-Back-N and Selective Repeat Protocol
17, May 19

08 Difference Between High-level Data Link Control (HDLC) and Point-to-Point Protocol (PPP)
23, May 19

Article Contributed By :

SakshiBhakhra
@SakshiBhakhra

Vote for difficulty

Easy | Normal | Medium | Hard | Expert

Improved By : vincentjohansson

Article Tags : Application Layer, Computer Networks, Difference Between, GATE CS

Practice Tags : Computer Networks

Improve Article | Report Issue

Writing code in comment? Please use ide.geeksforgeeks.org, generate link and share the link here.

Load Comments

How to begin? Videos