

What is PPTP (Point-to-Point Tunneling Protocol)?

Point-to-Point Tunneling Protocol is a network protocol mainly used with Windows computers. Today, it is considered obsolete when used in virtual private networks, because of many security flaws. However, PPTP is still used in some networks.

A brief history of PPTP

PPTP is a network protocol developed in 1999 by a supplier group, founded by Microsoft, Ascend Communications (part of Nokia), 3Com and many others. PPTP is designed to improve Point-to-Point Protocol, the data link layer protocol (Layer 2) was designed to directly connect two routers, before.

Despite being a fast and stable protocol for Windows networks, PPTP is no longer considered security. PPTP has been replaced by more secure and secure VPN tunneling protocols, including OpenVPN, L2TP / IPSec and IKEv2 / IPSec.



PPTP is an outstanding development of PPP

How does PPTP work?

PPTP is an outstanding development of PPP and therefore, based on its authentication and encryption framework. Like all tunneling technologies, PPTP encapsulates data packets, creating a tunnel for data to be transmitted over an IP network.

PPTP uses a client-server design (specifications included in Internet RFC 2637) that work on Layer 2 of the OSI model. Once the VPN tunnel is established, PPTP supports two types of information flows:

1. Control messages go directly between the VPN client and the server.
2. Data packets go through the tunnel, ie to or from the VPN client.

People often get the information of PPTP VPN server address from admin. The connection string can be server name or IP address.

The PPTP protocol

PPTP uses the General Routing Encapsulation tunneling technique to encapsulate data packets. It uses TCP port 1723 and port IP 47 via the Transport Control Protocol. PPTP supports encryption keys of up to 128 bits and Microsoft's Point-to-Point Encryption standards.

Tunneling modes: Voluntary and Compulsory

The protocol supports two types of tunneling:

- **Voluntary Tunneling** : A type of tunneling initiated by the client on an existing connection to the server.
- **Compulsory Tunneling** : A type of tunneling initiated by the PPTP server at the ISP, requiring the remote access server to create the tunnel.

Is PPTP still in use?



PPTP is still used in some network deployment cases

Although it has been around for a long time and has security flaws, PPTP is still used in some network deployment cases, mostly internal business VPNs in old offices. The advantage of PPTP is that it is easy to install, fast and because it is integrated on most platforms, you do not need any special software to use. All you need to establish a connection is the login information and the server address.

However, being easy to use PPTP does not mean you should use it, especially if having a high level of security is important to you. In that case, you should use a better security protocol for your VPN network, such as OpenVPN, L2TP / IPsec or IKEv2 / IPsec.

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