



serverloft

Dedicated Servers for Demanding Solutions

I Product Description serverloft Private Network / VPN

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I serverloft is a brand of PlusServer AG.

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This is a translation of a German document. Errors and omissions excepted.

Trade Register:
HRB 42945, County Court Köln

Sales Tax-ID:
DE 216 740 823

Private Network

With the Private Network product, serverloft offers you the possibility to connect any number of servers to build your own VLANs. The total number of VLANs is only limited by the number of servers a customer has. The product can be booked very easily in the serverloft panel as an add-on to the main contract. The charges are billed in the same intervals as the main contract.

1. Product Variations

The product Private Network is available in three versions at present:

Product Name	Price per Server	Bandwidth
Private Network L	9 Euro/month	10 Mbit/s
Private Network XL	19 Euro/month	100 Mbit/s
Private Network XXL	49 Euro/month	1000 Mbit/s

2. Technical Description

Within 24 hours after the Private Network product has been ordered, all of the customer's servers are physically interconnected in the data center. During this process, the respective ports on the switch are ready configured for the desired VLAN. Later, it is possible for the customer to modify the VLAN in the panel as needed and with immediate effect. This means that servers can be added or removed without any further delays due to configuration in the data center.

3. Structure

All of a customer's servers are connected to the internal network switch with a second network card in order to enable data exchange between all servers independent of the global network. These particular servers are connected in the same VLAN. Additionally, all switches are interconnected, so that all of a customer's servers in one data center have the option of using the same VLAN.

4. Configuration

You can determine for each server in the serverloft panel if and in which VLAN it should be. In doing so, you can either select a new VLAN or assign the server to an already existing VLAN. Servers can also be removed from a VLAN anytime. All assignments and changes are carried out in real-time. VLANs are always exclusively used by one serverloft customer and never shared between several customers.

5. Port Speed

There may be different server and port speeds within a VLAN. A later upgrade of port speed is always possible, however, and can be carried out in real-time in the panel.

6. IP Addresses

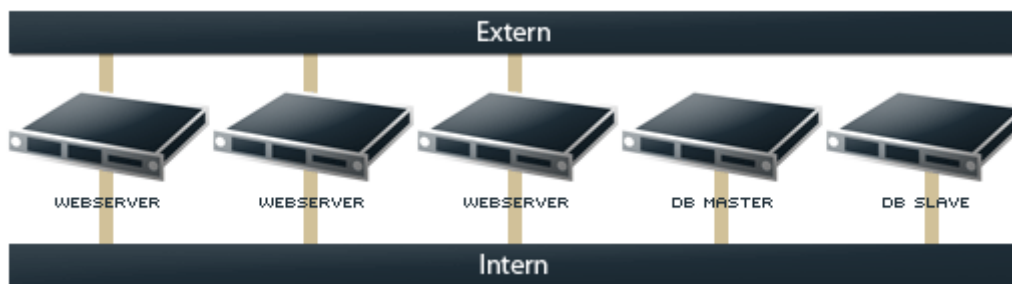
For each VLAN you get a Class C network with 256 private IP addresses. The IP address range is taken from the private network 172.18.0.0/16. These IP addresses can be allocated as desired. The available IP addresses are shown in the respective panel area, where it is also possible to make notes of what the IPs are used for.

7. Traffic

Traffic within the private network is free of charge.

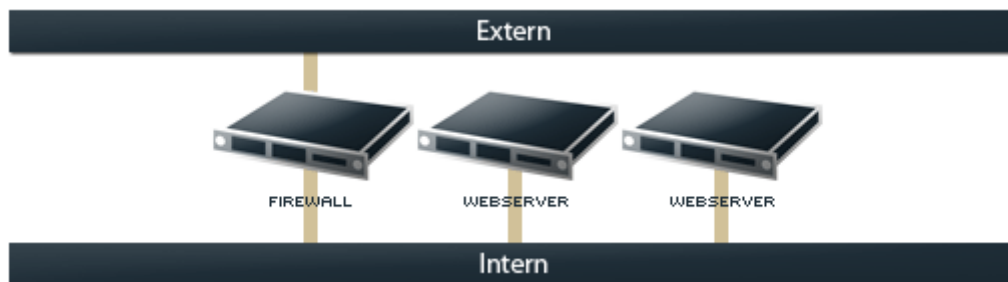
8. Application Scenarios

8.1. Web server with a central database



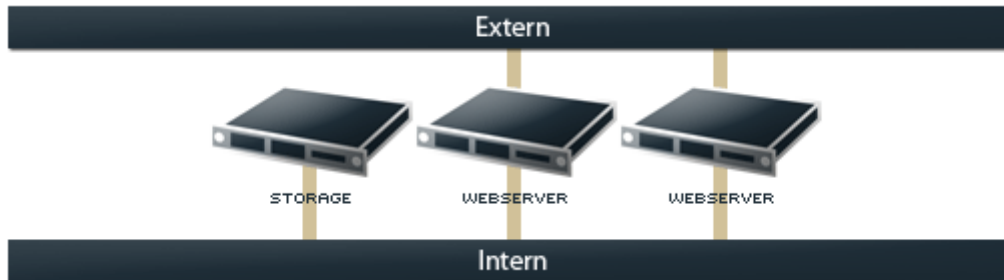
In this example a serverloft customer has five servers. Three of those servers could be configured as web servers with a database in the background consisting of the other two servers. This database works in a mirror, which means that all data is available on two servers at a time. On the one hand this mirroring speeds up the delivery of requested data, on the other hand the data is more secure. In this scenario the web servers could be reached from the outside over the internet as well as internally, while the database servers only have an internal connection, which protects them from unwanted access. With this setup the customer could provide data quickly and securely.

8.2. Dedicated firewall in front of web servers



Here, a server is used as a dedicated firewall in front of the web servers, so that it can filter the incoming traffic, thus protecting the data on the web servers. Only the firewall can be reached from the outside, the web servers are only connected over the internal network.

8.3. Central storage over NFS (available shortly)



In this scenario the web servers are completed by a central storage server which can not be reached from outside but only over the internal network. The web servers can access the storage server over the NFS or iSCSI protocol, which means that the data on the storage server are available as rapidly and easily as if it was stored on a local disk. However, it is better protected from unwanted access or loss, because it is screened from the internet.

VPN

serverloft gives you five VPN accounts for each VLAN for free. With those accounts you can dial into an internal network with user name and password and access the servers therein. The VPN server is accessed over a completely independent internet connection so that this access is still possible even if the serverloft network should fail.

1. Technical Description

VPN is established over the PPTP protocol, so that the connection can be setup quickly and easily in Windows, and no additional software is needed. In order to avoid misuse, only connections over SSH or RDP are allowed by the firewall.

2. Users

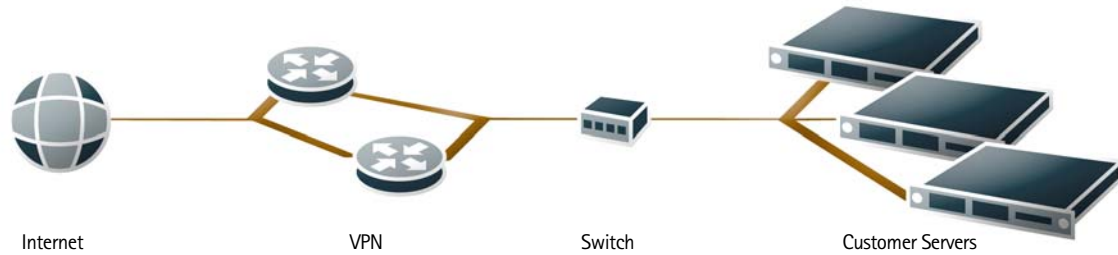
For each VLAN up to five users (VPN accounts) can be setup for free in the serverloft panel. Each user gets a user name and a password for logging into the internal network. Users can be switched active or inactive in the panel, or deleted if no longer used.

3. Configuration

For the configuration of the VPN account, one IP from the network 172.17.0.0/16 is given to the user. This IP will then be the client IP on the system from which the user wants to establish the VPN tunnel. An additional route into the internal network has to be established on the client system. Moreover, it is necessary to set a route on the server into the VPN network. It is not necessary, however, to state a gateway.

Since this access is only available for administration, only the ports 3389 (Remote Desktop) and 22 (SSH) are possible with the VPN. The server you have to connect to is `vpn.serverloft.de|eu|com`. The authentication method for the VPN is MSCHAPv2.

4. Structure



The graphic above illustrates the setup of an internal network. If a serverloft customer wants to access his internal network via VPN, he connects with PPTP over an upstream that is independent of the private network to one of the VPN terminal points. All VPN IPs are again situated in a separate VPN VLAN and come from the network 172.17.0.0/16. The VPN terminal points run in automatic failover, so that if a VPN terminal point fails, the other VPN terminal point will take over.

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