

■ PlusServer AG | Product Description

# Managed Loadbalancing

Germany, Version 3.1-EN, as of August 10, 2009

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## 1. Introduction

Modern hosting solutions generally do not consist of only one server. However, to ensure that all incoming traffic is balanced efficiently to all servers, or in the case of an issue, the traffic must be rerouted. PlusServer provides the Managed Loadbalancing solution to meet these requirements.

## 2. Product Description

The Managed Loadbalancing solution is designed to route the traffic through a redundant infrastructure of loadbalancers to achieve an optimal load sharing between all servers. The complete management, administration and maintenance are conducted by PlusServer. This service includes the hardware, connectivity, and any additional ordered services. In addition, the customers are supported by the PlusServer Support Team.

Managed Loadbalancing Local contains the following services:

- Consulting (technical specification of the individual service)
- First setup for loadbalancing (VLAN, VIPs etc.)
- Customization of technical parameters after consultation with the customer
- Documentation of the service and configuration
- Setup of server hardware
- Service and monitoring of the entire infrastructure

### 2.1. Technical Description

To configure a loadbalancing service, a virtual IP (VIP) needs to be set up on the loadbalancer, which is publicly accessible. All traffic is addressed to this VIP and gets load balanced to the real servers. There are different loadbalancing methods available; such as round-robin, or least-connection. Furthermore, safe balancing sessions, e.g. using cookies or read the http header, are possible.

PlusServer uses ServerIron Loadbalancers from Foundry as well as Big IP Loadbalancers from F5.

The following specifications are regulated per product version:

- Virtual IP (VIP)  
A VIP is a virtual server configured on the loadbalancer with a public IP address, which receives all incoming traffic and forwards it to the servers. Each VIP can have multiple services configured like web server (http + https), mail service, ftp service, etc.
- Layer7 throughput in Mbit/s  
The maximum bandwidth for the traffic in both directions that is routed through a VIP on the loadbalancer.
- Concurrent sessions  
Open sessions at any given time, e.g. a user browsing a web page.
- Connections per second  
This is the amount of new connections per second to the loadbalancer.

# ■ Managed Loadbalancing



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## 2.2. Product Versions Managed Loadbalancing Local

We offer the following loadbalancing packages:

- |   |   |
|---|---|
| <b>2.2.1. Managed Loadbalancing Local Medium</b>  | 10 MBit/s Layer 7 throughput<br>30,000 concurrent sessions<br>750 connections per second and 1 Virtual IP               |
| <b>2.2.2. Managed Loadbalancing Local Large</b>   | 100 Mbit/s Layer 7 throughput<br>75,000 concurrent sessions<br>2,000 connections per second and 5 Virtual IPs           |
| <b>2.2.3. Managed Loadbalancing Local X-Large</b> | 200 Mbit/s Layer 7 throughput<br>150,000 concurrent Layer 7 sessions<br>3,000 connections per second and 10 Virtual IPs |
| <b>2.2.4. Managed Loadbalancing Individual</b>    | On request  |

## 2.3 SSL Termination

SSL Termination can be booked in addition to a Managed Loadbalancing package with the following specifications. When using SSL Termination, the SSL certificates are installed directly on the loadbalancer, so that the servers behind it will be disburdened.

- |   |   |
|---|---|
| <b>2.3.1 SSL Termination Medium</b>     | Number of certificates: 1<br>Transactions per second: 10  |
| <b>2.3.2 SSL Termination Large</b>      | Number of certificates: 3<br>Transactions per second: 30  |
| <b>2.3.3 SSL Termination X-Large</b>    | Number of certificates: 5<br>Transactions per second: 100 |
| <b>2.3.4 SSL Termination Individual</b> | On request  |

## 2.4 Configuration

The complete configuration and administration is handled by PlusServer. A meeting will be arranged between the customer and the PlusServer Technical Consultant team. In order to change the initial setup, it will be necessary to send an alteration request to the Technical Consultants. After approval the change will be done.

## 3. Product Description Managed Loadbalancing Global

Data center independent loadbalancing can be achieved with a global loadbalancing configuration. Using this setup, traffic can be load shared between two or more independent data centers to prevent downtime, in case of complete network failure in one data center, Managed Loadbalancing Global makes it possible to route traffic depending on specific criteria to different locations worldwide. The complete administration and maintenance is handled by PlusServer. Furthermore, support is provided by the PlusServer Support Team.

Managed Loadbalancing Global contains the following services:

- Consulting (technical specifications dependent on customer requirements)
- Initial configuration of the global loadbalancer
- Customization of the configuration in consultation with the customer
- Documentation regarding the service performance and configuration
- Surveillance and monitoring of the infrastructure

# ■ Managed Loadbalancing



Product Description, Germany, Version 3.1-EN, as of August 10, 2009

## 3.1 Technical Description

Managed Loadbalancing Global is a DNS based service which provides the opportunity to manage traffic according to the customer's performance and availability needs. In addition, Loadbalancing Global and Local can be combined for the best solution for availability, performance, and scalability.

With Managed Loadbalancing Global you have a wide list of options to regulate your traffic. You can use those rules to route users to the nearest data center or initiate ratio based balancing between different data centers. Managed Loadbalancing Global service works with a DNS extension. A network with more than 20 worldwide distributed name servers guarantees a fast name resolution. Our technical partner for this service is Level 3.

## 3.2 Product Versions Managed Loadbalancing Global

Managed Loadbalancing Global is being offered individually for each customer. Please contact our sales department for more information.

## 3.3 Configuration

The configuration and administration will be the sole responsibility of PlusServer. For this an initial meeting between the customer and the PlusServer Technical Consultant will be arranged. If the client requires changes to be made to the parameters, a change request needs to be submitted by the client and approved by the technical consulting team. Once approved, the requested changes will be made by the PlusServer Technical Team.

## 4. Service Level

A service level agreement is offered for PlusServer Managed Loadbalancing. It contains service availabilities, maximum recovery times, and maximum response times. The Service Level Agreement is provided as a separate document.

## 5. Service Management and Support

### 5.1 System Monitoring

The Support and Service Center by PlusServer is working 24 hours a day on 365 days a year. If the Support and Service Center detects a failure in the services, arrangements to correct the failure will be initiated immediately.

### 5.2. Hotline

PlusServer is available to its clients 24 hours each day, every day of the year, through our Hotline. Information for the Hotline is provided after the service has been provisioned. PlusServer usually confirms incoming error reports from customers within one hour, and informs the customer on short notice about the troubleshooting status.

### 5.3. Scheduled Maintenance

PlusServer announces scheduled maintenance, which may impact a customer's service, at least three business days in advance. Scheduled maintenance is normally performed between midnight and 6 a.m. CET.

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Jan Osthues, Jochen Berger, Thomas Strohe

#### Supervisory Board:

Claudius Schmalschlaeger (Chairman)

#### Trade Register:

HRB 58428, Local Court Cologne

#### Sales Tax ID:

DE 216740823