



**Two-Tier Firewall GeNUGate**  
**Robust Security for Networks**

**GeNUA**

Security first.

# GeNUGate: Two-Tier Firewalls for Ultra-Secure Interfaces

The level of your IT security is largely defined by what happens at the interface between the Internet and your local network. Every outside access and all outbound data must pass through here. If you are able to thoroughly monitor data traffic here, you can set up direct blocks against unwanted connections and dangerous content, and provide effective protection for your network. With the GeNUGate firewall, we offer a high-security solution for this purpose. The special feature of the product is that it contains two different firewall systems – an application level gateway and a packet filter – combined into one compact solution. This two-tier structure distinguishes GeNUGate from other firewalls, and guarantees maximum security at the critical interface between your network and the Internet.

## Compact Complete Solution

GeNUGate is a complete solution: hardware, operating system, and firewall software. All components are perfectly coordinated and specifically designed for maximum security. The OpenBSD operating system ensures high security standards, and the two firewall systems – the application level gateway and the packet filter – run on physically separated computers.

## Application Level Gateway Checks Content

At the heart of the GeNUGate solution is the application level gateway. This advanced security system checks the content of your data flows. The first step in this process is to stop the incoming data packets – the application level gateway never allows a direct connection between the Internet and your local network. It then puts the packets together like a jigsaw, because content checks can be carried out only on complete data records. The application level gateway can now filter the data and block out unwanted material: active content, viruses, or

spam, depending on how you have configured your system. Application level gateways alone are capable of performing this type of content check. Only then is the data forwarded via a newly established connection. Packet filters, in contrast, whose security mechanisms form the sole basis for many other firewalls, can check formal criteria only.

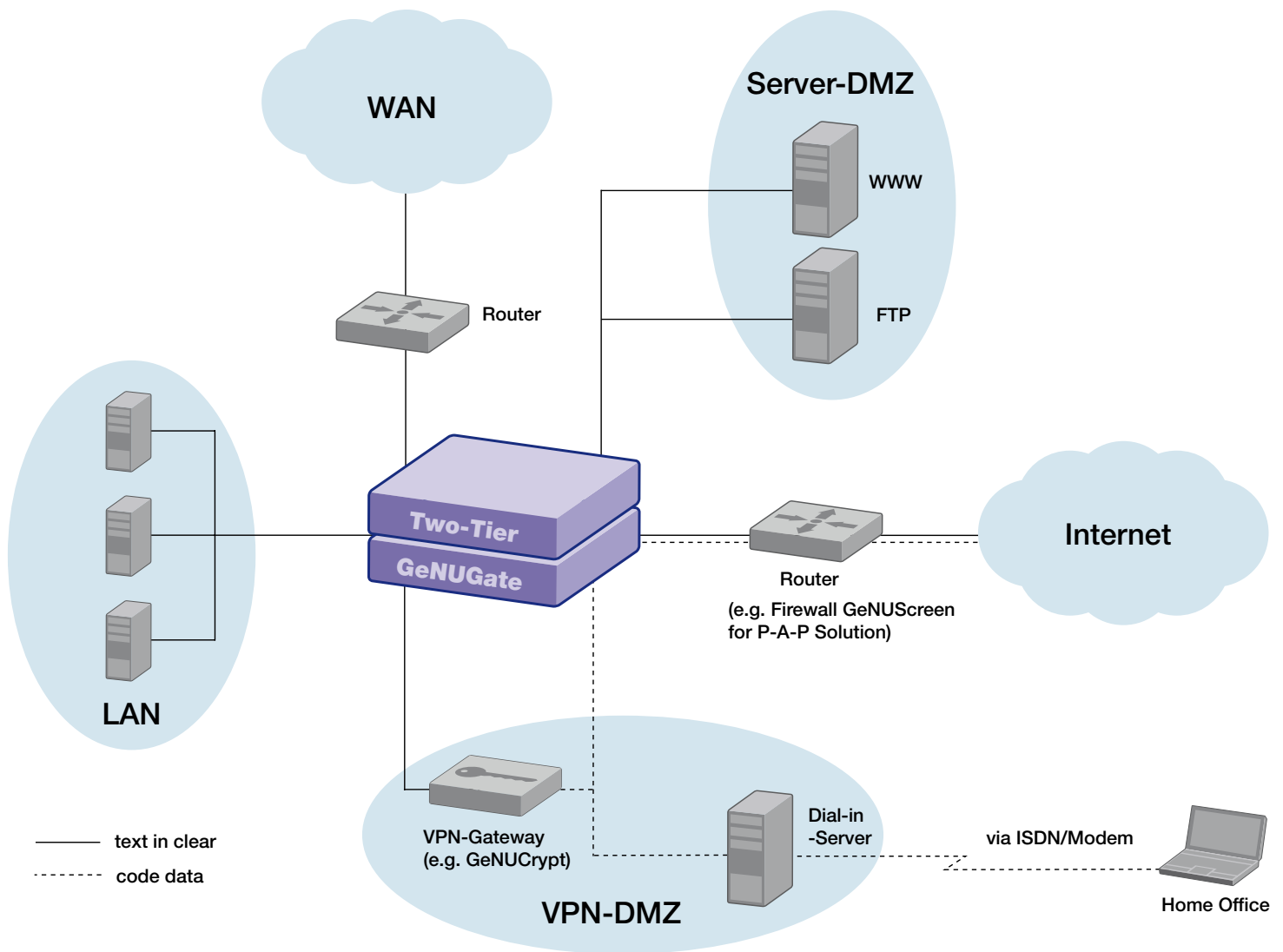
## Teamwork with Packet Filter

GeNUGate also has a packet filter, operating on the inside (local network side). The packet filter checks the data packets according to the header data: IP address, protocol type, and port number. As a result, all the data has to negotiate two firewall systems, with protection systems operating on different levels and perfectly complementing one another. The two systems effectively work as a team, each supporting the other. This two-stage structure, as a powerful application level gateway with an additional packet filter, is the central feature of GeNUGate that is your assurance of top-level security.

## Highly Effective at Blocking Spam

The Firewall-System has very efficient methods of blocking unwanted spam, such as greylisting and URL filters: over 95 percent of electronic spam can be rejected in this way, providing an extremely convenient solution to this annoying problem.





## Customized Security Zones for all Requirements

### GeNUGate: the Ideal Basis for a P-A-P-Solution

The German Federal Office for Information Security (BSI) recommends protecting the critical connection between the Internet and a local network with a firewall combination, consisting of

two packet filters and an application level gateway, or P-A-P for short. The packet filters placed on either side of the powerful application level gateway provide optimum protection against both direct attacks and high data loads. With GeNUGate, it becomes a

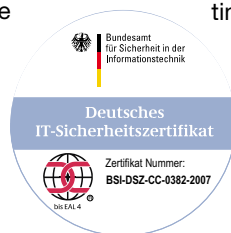
simple matter to provide this high level of protection. For example, a P-A-P solution can be created with an Internet router configured with rules to act as an additional packet filter, operated in conjunction with the two-stage GeNUGate system.

## Seal of Approval: Certified by the BSI to CC EAL 4+

The GeNUGate system has been certified at the strict EAL 4 security level by the German Federal Office for Information Security (BSI), in accordance with the international Common Criteria (CC) standard. This required the submission of detailed design documentation for all security mechanisms, including the complete source code, and involves extensive testing. This process allows independent experts to check that all security functions have been correctly implemented, down to every individual line of code. The result of this process was certification at the level EAL 4+ with the additional rating “Highly Resistant.”

## Highest Level for Complex Systems

What exactly is the significance of EAL 4+ certification with the additional classification of „Highly Resistant“? EAL 4 is the first level to include a source code audit, and concurrently is the highest level that can reasonably be applied to an entire system as complex as a firewall. The addition „+“ indicates however, that level EAL 4 has been surpassed for certain criteria. GeNUGate has achieved this in its handling of patches. However, this is a criterion other manufacturers also could fulfil in order to improve their certification level with a „+“.



## Only Highly Resistant Firewall in the World

Far more important for your IT security is the fact that GeNUGate meets even higher standards when it comes to self-protection: the firewall provides systematic dual protection using two different security mechanisms for all potential points of attack, such as interfaces. As a result, the system is highly resistant to direct and intelligently carried out attacks, thus meeting the criteria required for EAL 6.

Based on this exceptional security performance, the BSI classified GeNUGate as “Highly Resistant” – the only firewall in the world to achieve this rating. This guarantees our customers that they have purchased a high-security solution. Therefore, this stringent quality assurance test is repeated for every new major release.

## Hardware and Clusters for all Requirements

To precisely meet a wide range of different performance requirements, we supply GeNUGate in the hardware models GeNUGate 200, 400, 600, and 800. We can handle any bandwidth and availability requirements in excess of these capacities by using clusters: all GeNUGate models can be bundled to clusters with any capacity requirement the customer specifies.

## Administration Central Management Station

The firewall is administrated using a separate Web GUI. If you have deployed several GeNUGates or other GeNUA solutions, all systems can be administrated from the GeNUCenter Central Management Station. This allows you to keep track of the status of all your security systems at all times and conveniently transfer changes and updates. Thus, an extremely high level of security can be achieved throughout your entire network with little effort.

## The GeNUGate Support Service

In the area of support, your wish is our command. Many customers ask us to handle the whole process of administering their firewall solution. That means they can focus on their core business, and leave their IT security in our professional hands. We also offer hotline support 24 hours a day, seven days a week, and a regular update service.

## Hardware Support as Free Service

When it comes to hardware support, however, there is no choice to be made. Every GeNUGate comes with a Germany-wide next business day replacement service: if one of your appliances breaks down, you will receive an identical exchange unit on the next working day. We also ship exchange units to international locations, but due to shipping restraints cannot guarantee delivery until the next working day. This support service is provided free for the first three years after purchase of the product. Thereafter, a yearly fee will be charged.

## GeNUGate Can Do even More

A wide range of products can be added to the GeNUGate firewall system to create a comprehensive security solution. For example, the GeNUScan interface package allows the integration of a virus scanner for SMTP, HTTP, FTP, and POP3, and for situations with especially high-performance requirements, the external GeNUGate Scanserver can perform this role. GeNUA also offers standby systems, URL blockers, and VPL modules for secure data transfers, and reverse proxies for authentication and SSL encryption. We also offer a comprehensive range of training and consulting services, and express support in emergencies. Just ask – we're bound to have the solution for your problem!

## High-Security Gateways: RSGate and Diodes

For even more restrictive control of an interface, we provide our high-security gateways solutions: the RSGate implements document content checks, and has already proved its worth in practice, for example in military applications at so-called red-black interfaces. If it is essential that data is transmitted in one direction only, we provide packet or data diodes, depending on the requirement profile. No matter what task you set us, it is safe to say that we will have the right solution for it.

## GeNUA's Firewall Solutions

<b>Firewall</b> <b>GeNUScreen</b> <ul style="list-style-type: none"><li>• Saves sensible internal and external interfaces</li></ul>	<b>Two-Tier Firewall</b> <b>GeNUGate</b> <ul style="list-style-type: none"><li>• Saves high-sensible external interfaces</li></ul>	<b>High-Security Gateways</b> <b>RSGate</b> <ul style="list-style-type: none"><li>• Saves high-sensible Red-Black interfaces</li></ul> <b>Diodes</b> <ul style="list-style-type: none"><li>• Saves unidirectional interfaces</li></ul>
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### Our Customers Include:

- Ansbach Regional Authority
- Berlin-Bonn Information Network (IVBB)
- EUROGATE
- German Federal Agency for Technical Relief (THW)
- German Federal Public Prosecutor, Federal Supreme Court
- German Parliament Bundestag
- Homeland Security
- Hubert Burda Media
- Klüber Lubrication
- MAN Group
- Mülheim an der Ruhr municipal authority
- RTL II television channel
- Schober Information Group
- Signalbau Huber
- State Criminal Investigation Department of Thuringia
- Stuttgarter Lebensversicherung
- telegate AG
- VERMOP Salmon
- WMF AG
- Würth Group

### How GeNUGate Benefits You:

- The two-tier system ensures top security
- Control of data content by the Application Level Gateway
- Effective spam protection
- Convenient setup of a demilitarized zone (DMZ) on the basis of the two-tier system
- Clusters for high availability and bandwidths
- Simple integration offered as a complete solution
- Central administration through the GeNUCenter
- The BSI certificate means investment security for you

### About GeNUA

GeNUA, Gesellschaft für Netzwerk- und Unix-Administration, is a German IT security specialist. Since our company was founded in 1992, we have focused on securing networks and developing sophisticated solutions. Our products comprise high-grade firewalls certified by the German Federal Office for Information Security (BSI), intelligent link balancing for Internet connections, VPN and remote maintenance solutions, data optimization for satellite communications, and a wide range of services. About 100 specialized employees at our office in Kirchheim, near Munich, ensure the high quality of our services. Many large and medium-sized companies and authorities rely on us, using our solutions and services for their IT security.

