



GeNUBox Security Platform for Industrial Remote Maintenance



GeNUA

Security first.

Remote Maintenance with GeNUBox: Intelligent Solution for any Location

The GeNUBox may not be able to change its color like a chameleon – but it will enable intelligent remote maintenance at any location. To give an example: The propulsion diesel engine on a container ship needs to be remotely monitored and serviced by the manufacturer. To do so, data needs to be collected from the engine, evaluated, and transmitted securely to manufacturer support via satellite. Any required maintenance control commands need to be carried out on the spot. We have developed the GeNUBox security platform for these and related tasks in various environments, such as robotized automation systems and printing machines, wind turbines in remote locations, or offshore oil platforms. Using our solution, you can conveniently handle the entire process with the highest level of security.



Remote maintenance for marine diesel engines at sea

Functions Skillfully Combined

Our security platform can carry out a wide range of tasks required for industrial remote maintenance. To start with, GeNUBox generates strongly encrypted data connections using every method currently available, from Ethernet, DSL, and ISDN to analog lines and mobile radio, and even satellite. Anywhere in the world, you will always find a network to connect to. The GeNUBox also offers an application platform with integrated CPU, on which you can install the applications that are to be carried out on-site – providing an intelligent solution for remote maintenance. In addition, our solution operates independently from the system it is monitoring. The advantage is that remote maintenance will

continue to function even if the machinery monitored shuts down completely – and you can use a single GeNUBox to monitor any number of systems at a given location. The security platform's reliability is guaranteed by its operating system OpenBSD, specifically designed to meet rigorous security standards.

Encrypted Data Transfer via any Network and Satellite

GeNUBoxes are installed at the respective maintenance connection end points, i.e. the manufacturer's service center, and in the customer production center. When maintenance is required, the boxes connect to a strongly encrypted and authenticated Virtual Private Network (VPN) via available public networks such as the Internet. Target machine data is accessed via this secure connection, and control commands are issued. If no terrestrial network is available, calling for a satellite connection, GeNUBox activates special traffic optimization for satellite communications, accelerating TCP data transfers by a factor of 20. This means transfer rates far beyond the nominal satellite bandwidth can be attained without the risk of data loss, saving time and considerable cost.

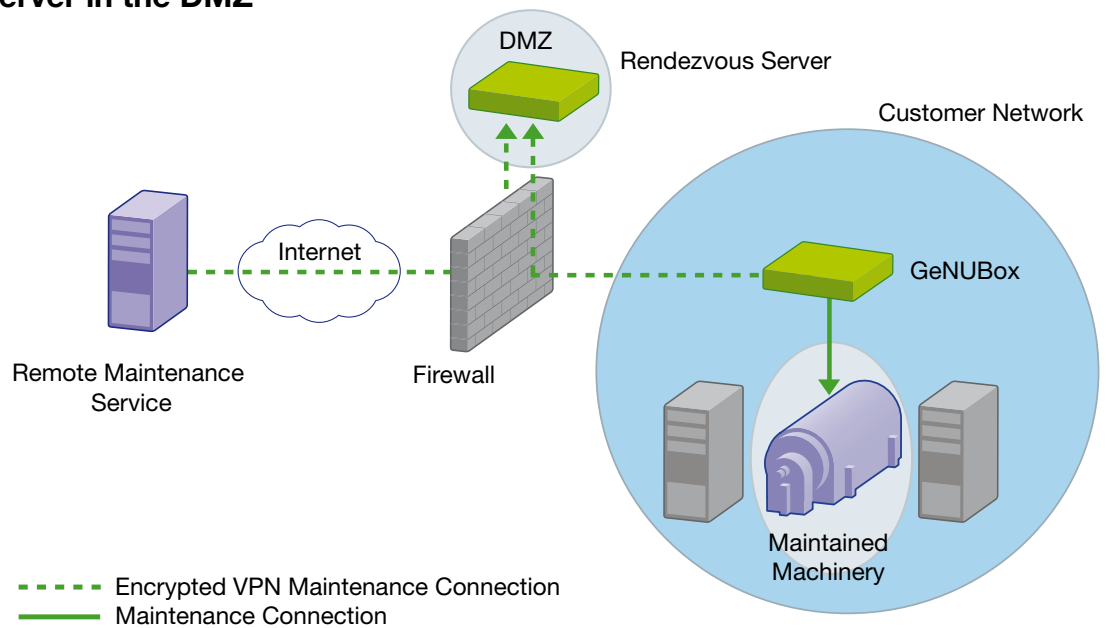
Intelligent Remote Maintenance

Your machinery will benefit from the intelligence of our on-site monitoring solution. Useful remote maintenance applications are pre-installed on the GeNUBox that will work directly with your machine PLC. For example, these applications can access, save, and compress data, and send it to the service center at a given time via VPN. In addition, the box can carry out other tasks on location: The application platform can accommodate individual applications to monitor, service, or precisely control machinery in accordance with your requirements. We will be happy to assist in implementing a customized solution.

Remote Access can Endanger IT Security

Companies with large production plants, as well as providers of remote maintenance, face the need for an increasing number of remote maintenance connections. They also must bear in mind that most of the machines being monitored

Rendezvous on Server in the DMZ



are integrated in local area networks (LANs). This means remote maintenance service providers need to have access to company networks. This touches directly on the sensitive area of IT security: If unauthorized persons or malicious codes manage to hack into the LAN via this maintenance access, this can have serious consequences – not least for the relationship between the remote maintenance provider and the customer.

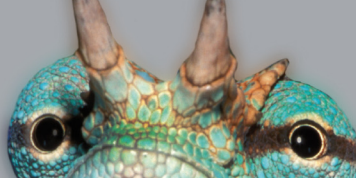
Secure Connection – Rendezvous in the DMZ

GeNUA has developed a solution that allows you to keep a close eye on every maintenance access. The concept: Access to external networks may not be unilaterally initiated. Instead, at an agreed time, the remote maintenance provider and the customer both create VPN connections to a server in a demilitarized zone (DMZ) outside their own networks. A connection to the company network is created only after rendezvous has been established on the server. This connection now lets the remote maintenance provider access the target machine. Access to this machine only is permitted, as the GeNUBox uses its firewall function to isolate this area from the LAN. This will prevent any access to other

areas of the company network from the machine undergoing maintenance. In addition, all activity is logged, and accesses can be traced at all times. This rendezvous solution makes it possible for both service providers and companies with large production plants to operate any number of remote maintenance connections, conveniently and with the highest level of security.

Our Customers:

- BLV Licht- und Vakuumtechnik
- Bornemann Pumps
- Freudenberg Group
- Klüber Lubrication
- City of Munich
- MAN Group
- manroland
- MTU Aero Engines
- KASTO Maschinenbau
- Schober Information Group
- Signalbau Huber
- telegate
- VERMOP Salmon
- WMF



Industrial Hardware for the Toughest Conditions

Various hardware models permit the use of GeNUBox in any environment: Compact appliance without any fans or shock-sensitive hard drives are completely maintenance-free, and will perform reliably even under the toughest environmental conditions. This industrial hardware can easily be installed on DIN rails, used in server racks, or run as standalone solutions. More powerful rack server systems are available for higher requirements. Systems can be clustered for high availability solutions. If one system fails, the other takes over its functions immediately, guaranteeing uninterrupted operation.

Straightforward Administration via Central Management Station

The GeNUBox is administrated via its local GUI or the GeNUCenter central management station, making it easy to operate installations of any size. For example, a machine manufacturer can monitor and access installations all over the world, with minimal outlay and from the comfort of the main office. Your customers would surely appreciate such prompt and cost-efficient service.



*Maintenance-free:
GeNUBox 100C compact appliance*

Our GeNUBox Services

Customer services for GeNUBox are provided directly by the manufacturer, GeNUA. On request, we can take complete responsibility for managing your remote maintenance solution. Specialists will keep a constant watch over your solution via encrypted Internet connections, and handle the entire administration. We also offer a support hotline, which will answer all questions by phone or e-mail, as well as regular update service. A Germany-wide next business day replacement service will handle any dropout of our hardware. An international replacement service also is available – we strive to ship anywhere as quickly as possible. Depending on the hardware model, this service is free up to three years after purchase.

Your Benefits from GeNUBox:

- A versatile platform for intelligent remote maintenance applications
- Strongly encrypted data transfer via VPN
- Connections via all terrestrial networks and satellite
- Accelerated satellite data transfer
- Complete connection logging
- High availability through clusters
- Maintenance-free industrial hardware
- High security standards guaranteed by the OpenBSD operating system
- Installable on DIN rails
- Central administration via management station

About GeNUA

GeNUA, Gesellschaft für Netzwerk- und Unix-Administration, is a German specialist company for IT security. Since the company was founded in 1992, we have specialized in providing sophisticated solutions to protect networks. Our products and services include firewall systems certified by the German Federal Office for Information Security (BSI), high-security gateways for red-black transitions, intelligent remote maintenance and VPN solutions, data optimization for satellite communication, and an extensive range of services. Many companies and security-conscious public authorities trust GeNUA to protect their IT systems.