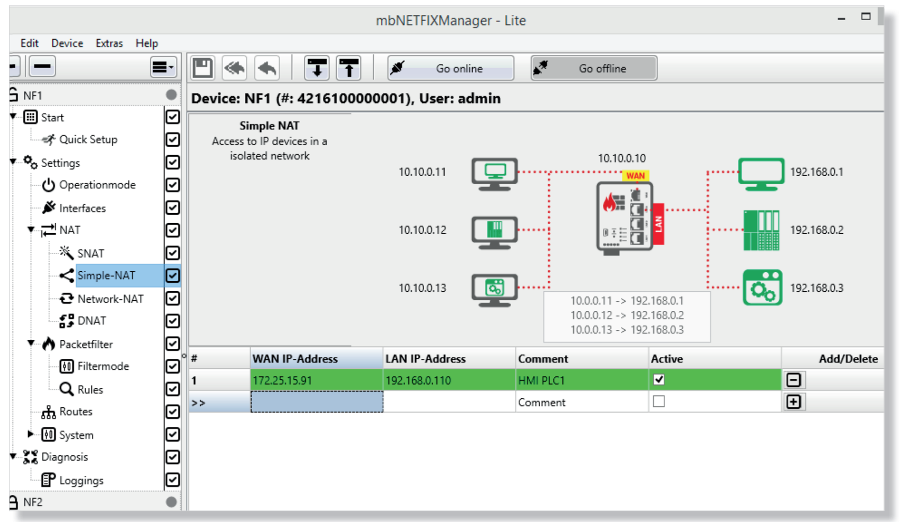
Preserve Automation Users' Workflows



Device: NF1 (#: 4216100000001), User: admin

Simple NAT
Access to IP devices in a isolated network

10.0.0.11 -> 192.168.0.1
10.0.0.12 -> 192.168.0.2
10.0.0.13 -> 192.168.0.3

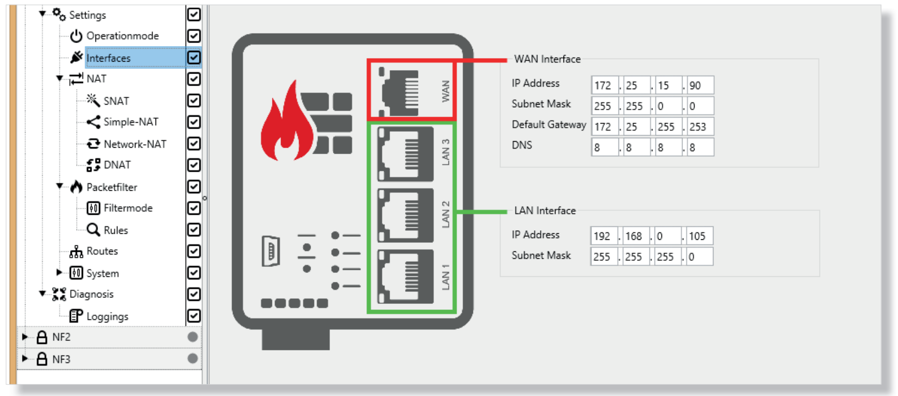
#	WAN IP-Address	LAN IP-Address	Comment	Active	Add/Delete
1	172.25.15.91	192.168.0.110	HMI PLC1	☑	⊟
>>			Comment	□	⊞

Manage the mbNETFIX like you would manage a PLC. Simply prepare a project and upload the configuration.

You can go online with the device and make changes and adjustments on the runtime, before saving the project for later reference.

Projects are protected by password and uniquely paired with their runtime version on the device. Projects can be exported and shared with other users, with equal or lesser access capabilities.

Graphical User Interface



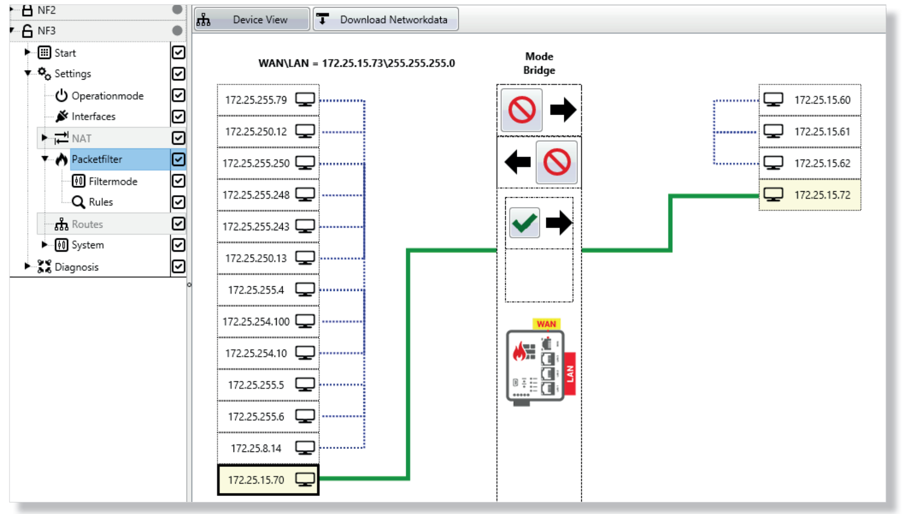
WAN Interface
IP Address 172 . 25 . 15 . 90
Subnet Mask 255 . 255 . 0 . 0
Default Gateway 172 . 25 . 255 . 253
DNS 8 . 8 . 8 . 8

LAN Interface
IP Address 192 . 168 . 0 . 105
Subnet Mask 255 . 255 . 255 . 0

The mbNETFIX manager assists the automation user in creating a project and setting up the device. It is designed to resemble the user interface of a PLC programming software.

The graphical user interface shows dynamically how the device is configured. Changes are displayed immediately. As a result, you can see how the actual NAT- and filtering rules are applied.

Learning Mode



WAN\LAN = 172.25.15.73\255.255.255.0

Unplug the machine from the network and connect it to one mbNETFIX LAN port. Plug the mbNETFIX WAN port back on the network. The firewall will listen to the occurring traffic.

When going online, you can see the traffic in the graphical user interface (GUI), as spotted by the firewall. Now you can select in mbNETFIX manager which connections are to be closed and which should be preserved.

The actual filter rules will be written automatically.

SPECIFICATIONS

- ✓ IP, port, MAC and protocol filters for monitoring and restricting data traffic
- ✓ Versatile NAT functionalities, eg 1:1 NAT, SimpleNAT and port forwarding
- ✓ Static routes
- ✓ 1x WAN and 3x LAN port switch
- ✓ Configuration with comfortable software
- ✓ Security by Design
- ✓ Power supply 10-30 VDC
- ✓ DIN rail mounting
- ✓ Dimensions 69 mm x 38.5 mm x 92.5 mm (W x D x H)

Order Details

HARDWARE

Name	Item No.	WAN	LAN	Description
NFH100	5.100.200.01.00	1x	3x	3x LAN 10/100 MBit/s

SOFTWARE

Name	Item No.	Description
mbNETFIX Manager Lite	5.900.000.01.00	USB-Stick with Manager Lite Software

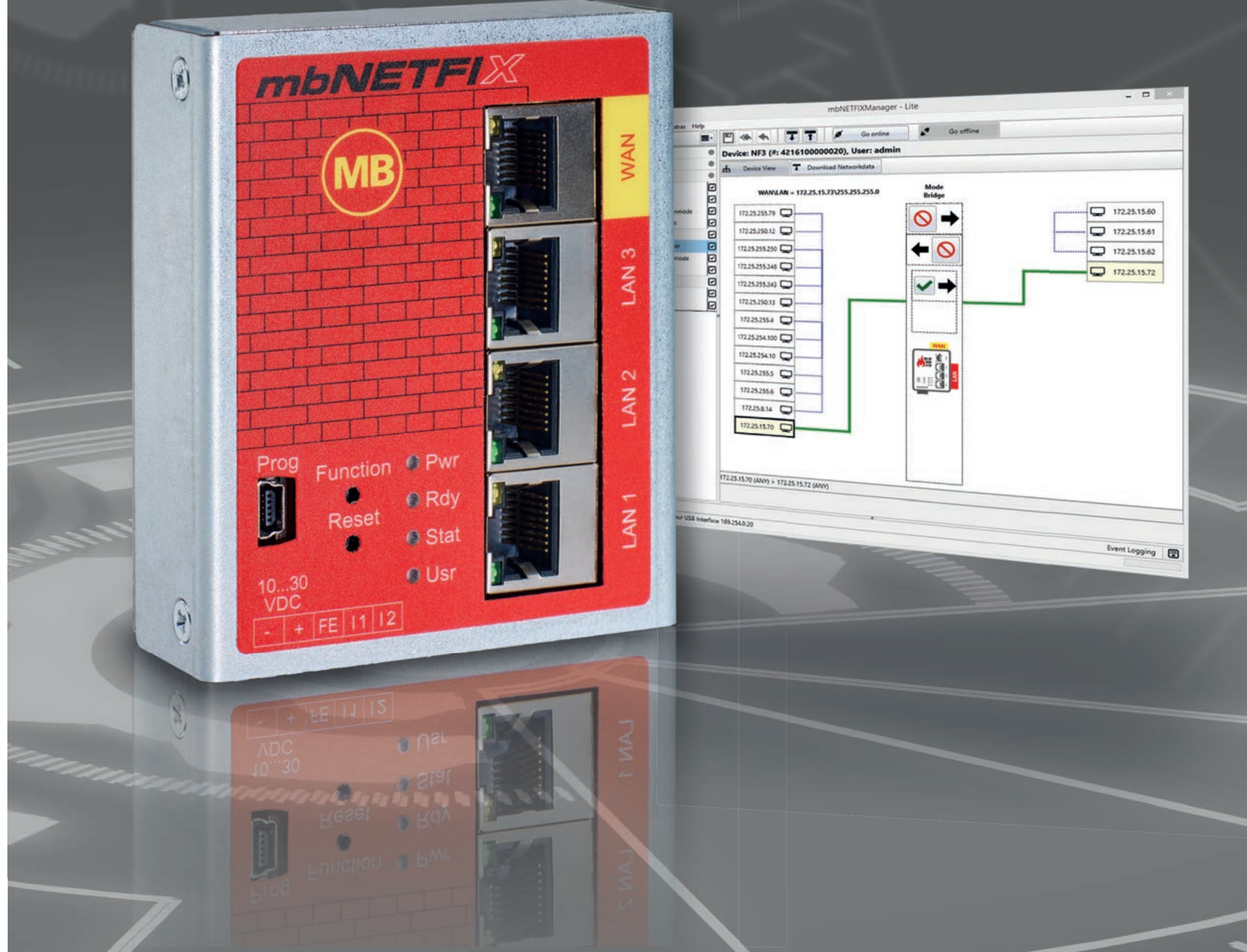
www.mbconnectline.com

MB connect line GmbH
Winnettener Str. 6
91550 Dinkelsbuehl

Tel.: + 49 (0) 9851 / 58 25 29 0
Fax: + 49 (0) 9851 / 58 25 29 99

info@mbconnectline.com
www.mbconnectline.com

MB CONNECTLINE

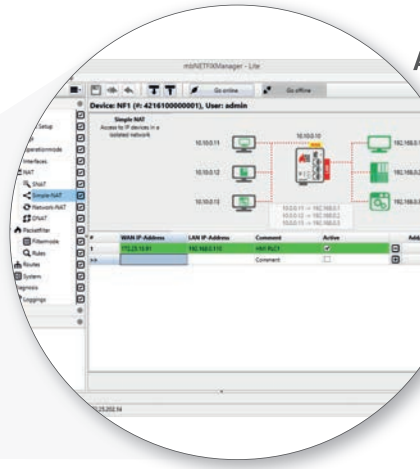


mbNETFIX

THE AUTOMATION FIREWALL

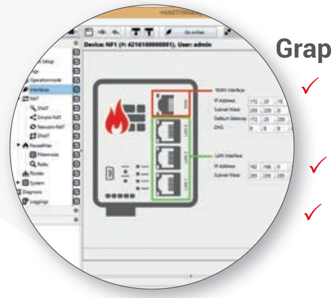
mbNETFIX

SECURE AND CONNECT INDUSTRIAL NETWORKS



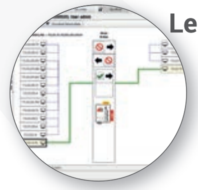
Automation User's Workflow

- ✓ Prepare projects and upload them to the device
- ✓ Go online and make changes on the runtime version
- ✓ Export projects and share with other users



Graphical User Interface

- ✓ PLC programming-like environment
- ✓ View configuration and changes
- ✓ See how setup and rules apply



Learning Mode

- ✓ Visualize actively communicating devices
- ✓ Chose general traffic policies
- ✓ Select, which connections need to be preserved

Providers of OT-Cybersecurity

Industrial network convergence towards one single Ethernet infrastructure brings many benefits to the automation user, in terms of data flow, process integration and devices accessibility, yet, this concurrently brings along an increased need for cybersecurity within OT-networks.

Electronic components, that used to be coupled on a proprietary serial network, are now connected via ethernet. The machine network is connected to the factory, the factory network is connected to the office and the office network is connected to the internet.

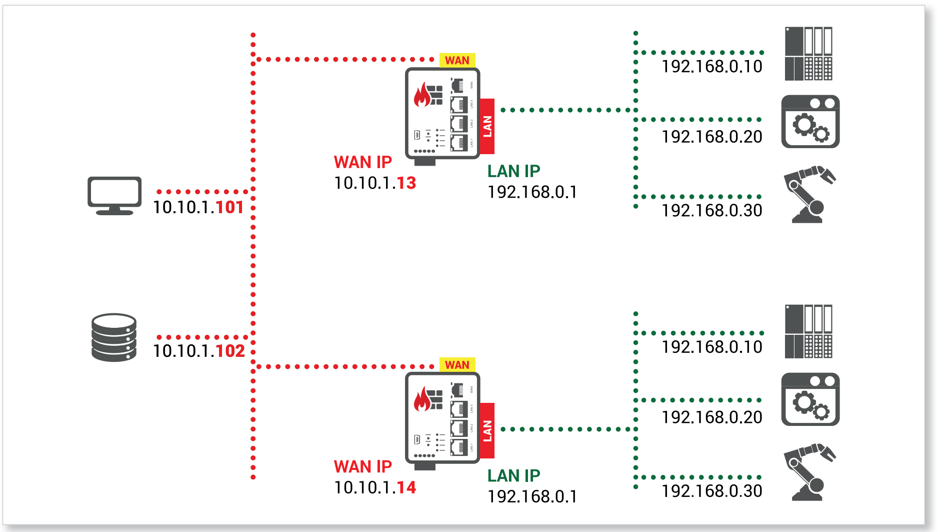
While IT protects networks from inbound threats, coming from outside the company, OT networks are now left with increased vulnerability to threats coming from inside the premises: an unfortunate click on a nasty email attachment, an infected USB-key plugged on an operator panel, a remote service technician servicing the machine from an infected support PC. Such incidents happen and segmenting the network with tight access control is the best way to prevent malware to spread across the whole production floor.

Secure Your Production Network

Avoid address conflicts & isolate internal network

Because machine components need to communicate seamlessly with other production devices, It is important to isolate the machine internal network from the factory network and offer a controlled access to its components services.

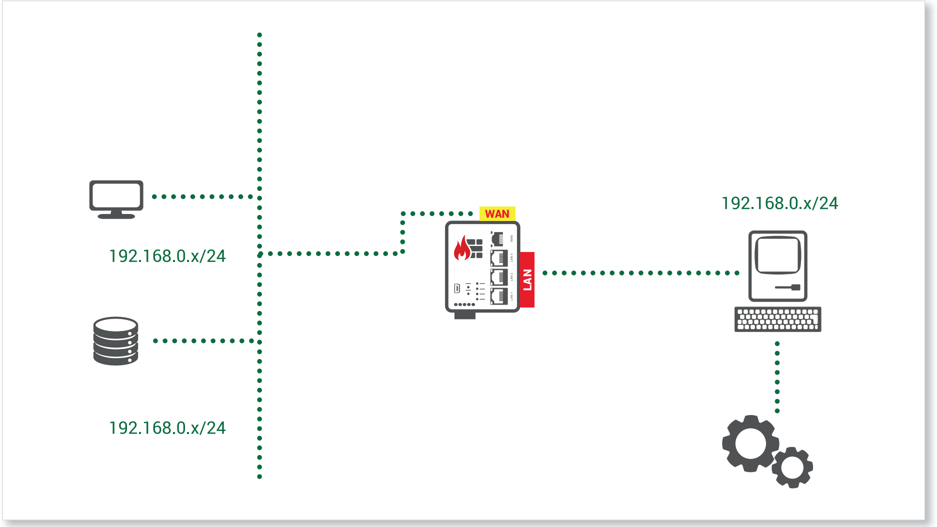
Hiding the internal network behind a firewall is a way to avoid address conflicts when installing new machines.



Secure old equipment

Old machines and production systems are often still very valuable for the factory. Sometimes, plant operators would prefer to postpone changes as long as possible.

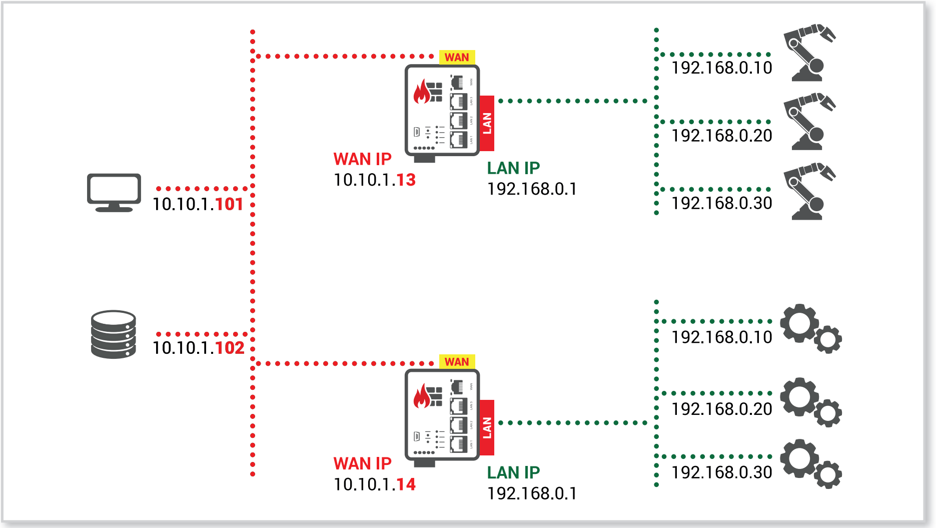
Yet, those systems, running on outdated operating systems are particularly vulnerable to modern cyber-threats. By controlling the access to such equipment, the firewall will contribute to extend its operational lifetime.



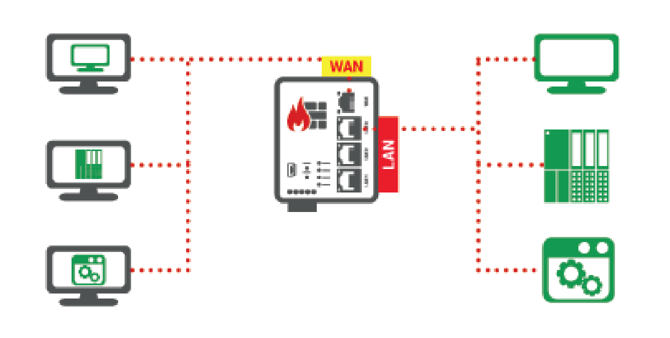
Isolate machines or groups of machines

A factory may use multiple production lines with several independent units. Machines within these units may generate a lot of traffic.

The firewall will keep this traffic locally and preserve the OT-network from it. Also, by segmenting the network and controlling access rules, the firewall will prevent possible cyber-threats to spread from one to another.



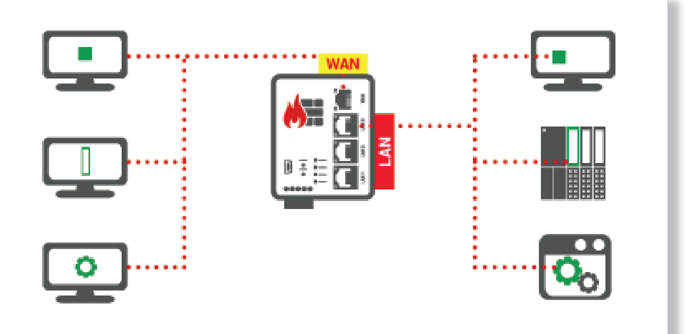
Fully functional Router and Firewall



Simple NAT
Selected LAN devices appear with an individual WAN address managed by the router

Source NAT
LAN devices reply locally to the router, no gateway needed

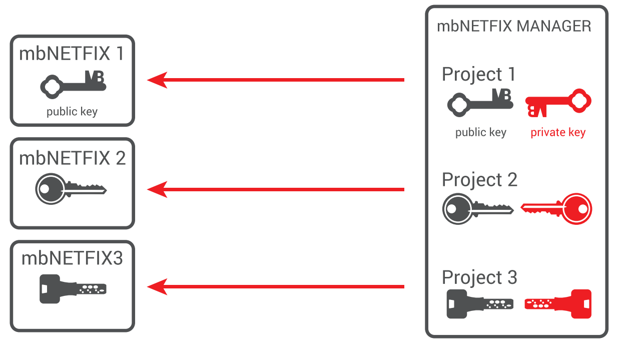
Network NAT
LAN network remains hidden, WAN devices access it through a virtual LAN network managed by the router



Portforwarding
With portforwarding, a single port can be directed to a specific IP-address by specifying the port.

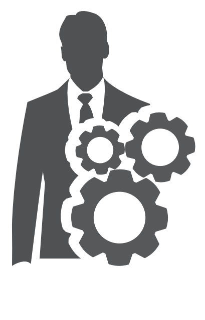
Security by Design

Security by Design is about implementing information security right from the beginning of the design process. In order to keep attack vectors as small as possible the automation firewall features characteristics, such as:



- ✓ No embedded website: securing a website is complex and requires considerable resources, hardly available when dealing with embedded programming.
- ✓ Projects are encrypted and uniquely paired by means of an RSA key. This key is automatically generated and stored on the device. It provides a method of assuring the confidentiality, integrity, authenticity and non-reputability of electronic communication.

3+1 User Access Levels



Administrator

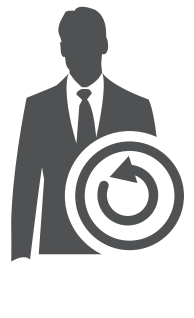
Full access to the device configuration and can export the projects for users with more restricted accesses

Operator

Can change routing tables, NAT settings, filtering rules, but not operating mode, system settings, LAN or WAN addresses.

Viewer

Has full viewing access but cannot make any change (diagnostic user)



Factory Reset

Can only reset the unit and requires visual and physical access to the unit to do so