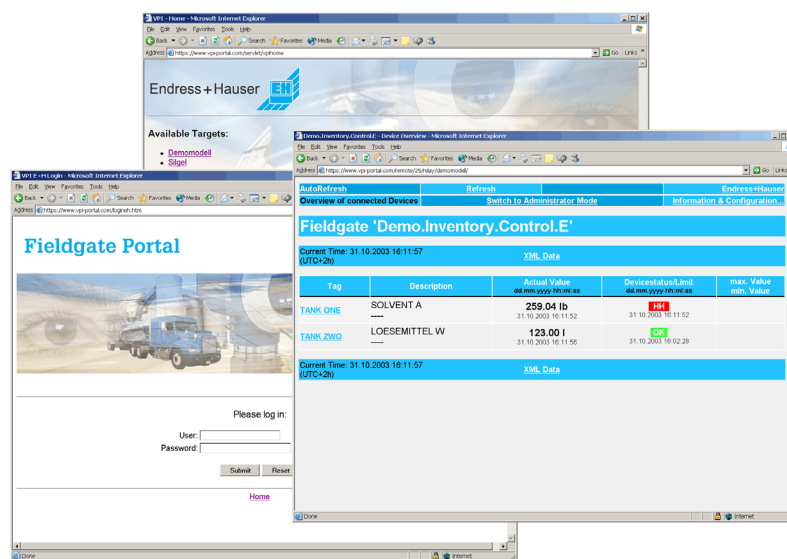


Technical Information

Fieldgate® Portal

Communication platform for Fieldgate® over the Internet



Application

Remote monitoring over the Internet is cost effective due to existing infrastructures with well proven technologies and standard protocols. Endress+Hauser's Fieldgate® Portal connects to Fieldgate® in Local Area Networks (LAN) by Virtual Private Infrastructure (VPI). It provides a secure connection, allowing only authorized individuals to access Fieldgate® and data.

Your benefits

Fieldgate® Portal

- VPI (Virtual Private Infrastructure) technology allows for flexibility, power and ease of use
- Secure connection over the Internet
- Remote monitoring via a standard web browser

VPI Agent

- The LAN operator has full control of the VPI Agent
- Easy installation and configuration

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Applications

Inventory Control

Endress+Hauser's Inventory Control solutions allows customers to have information about current inventories of bulk material at any time at any place.

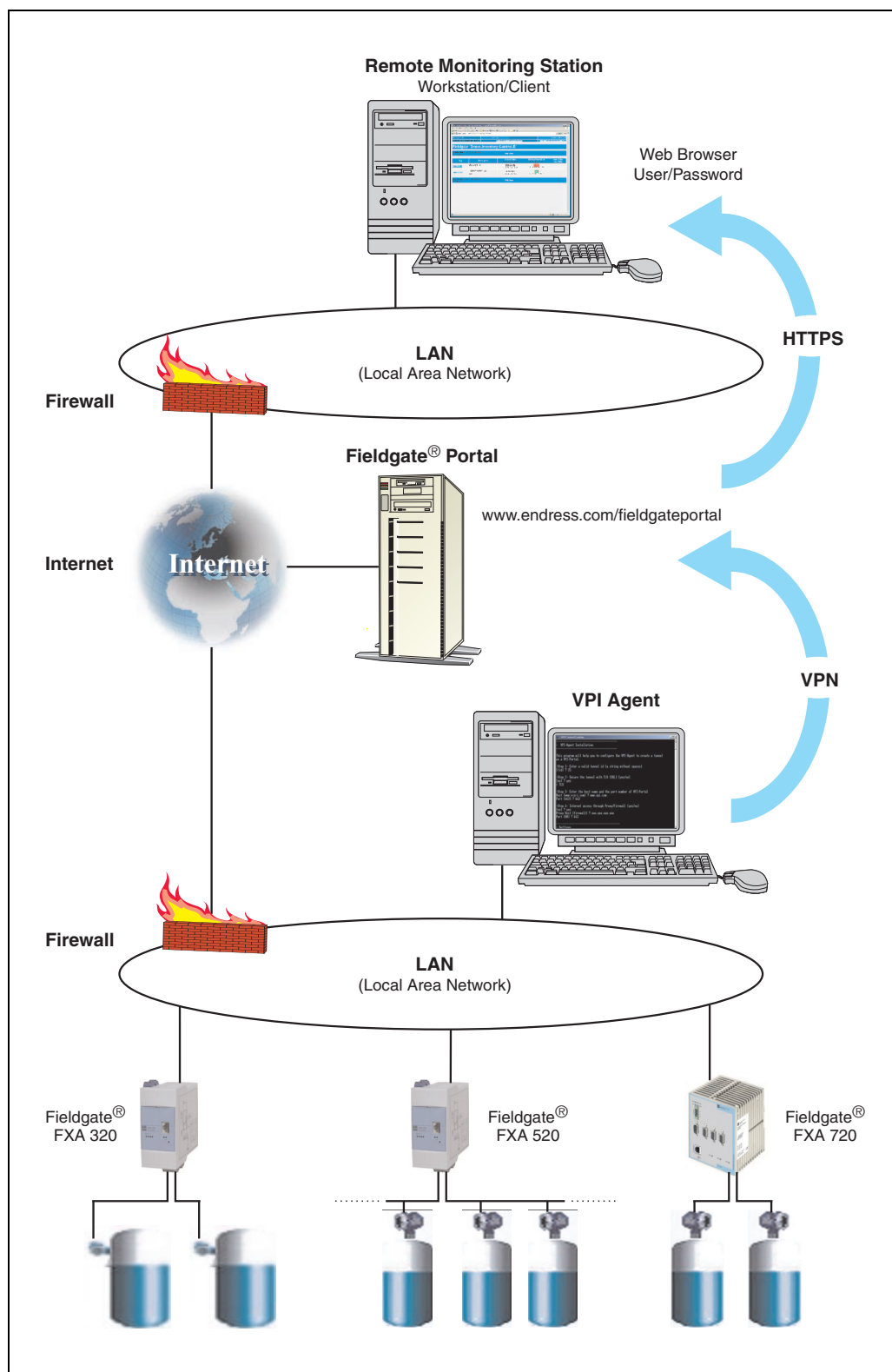
Based on reliable measurement devices for level and flow the inventory information is distributed using state-of the art network technology.

It allows the optimisation of business processes like automatised purchasing and enables collaborative business models like Vendor Managed Inventory.

Function and system design

System

Endress+Hauser Fieldgate® Portal is the transparent communication platform for connecting Fieldgate® from the local area network (LAN) to the internet. It creates a secure Internet tunnel to the VPI Agent to communicate with Fieldgate®. The Fieldgate® Portal handles the security and authentication and forwards the HTTP requests to the VPI Agent, which acts as a relay station and forwards them to the Fieldgate®. The Fieldgate® Portal allows only authorized individuals to access Fieldgate® and data.

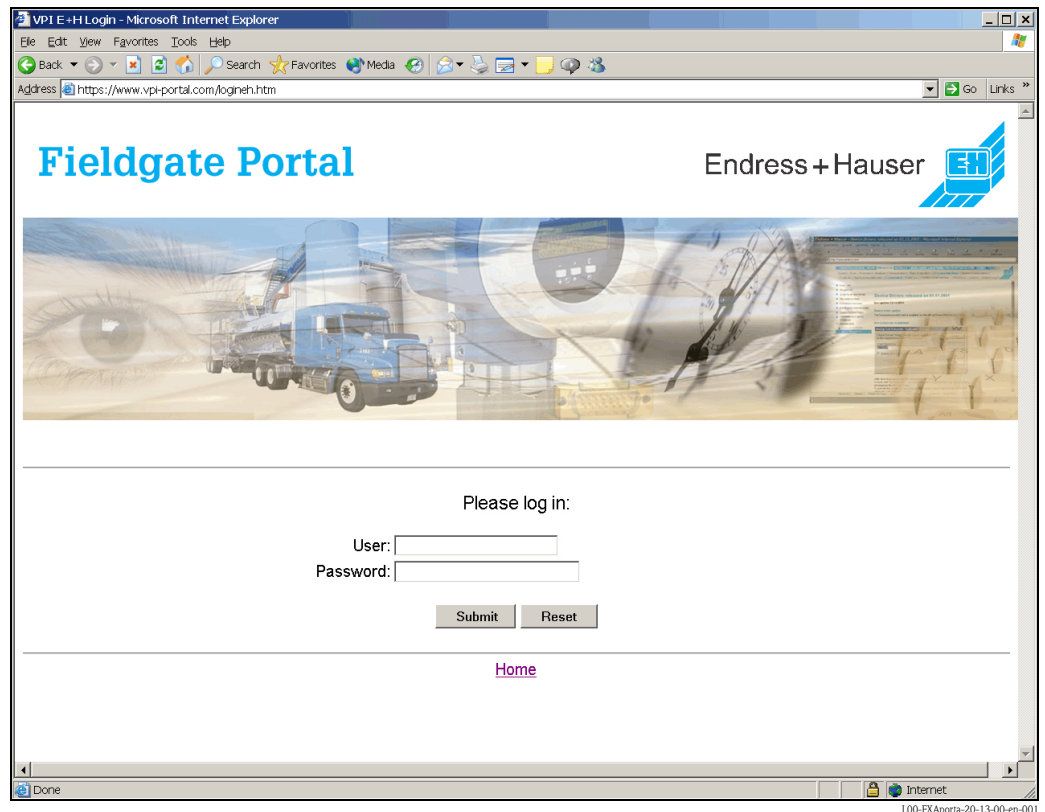


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System Components

Fieldgate® Portal

- Communication platform that is transparent on the Internet (HTTPS) level.
- Relays requests/responses to and from the Client Remote Monitoring Station and VPI Agent.
- The Fieldgate® Portal is setup and configured by Endress+Hauser. Once it is setup, the user selects the appropriate address of the server and must enter a valid user name and password. The user then receives a list with links of Fieldgate® that can be accessed. When a target is selected, the connection is created fully transparent via the marked route.



Fieldgate® Portal can be found under: "www.endress.com/fieldgateportal".

VPI Agent

- Software module that allows access to Fieldgate® from the Fieldgate® Portal.
- Similar to VPN (Virtual Private Network) technology but on a device level.
- The operator of the Intranet has control over the VPI Agent and can define at any time which Fieldgate® should be imaged on the Internet. Through the Internet Service Provider (ISP), the VPI Agent keeps a secure tunnel to the Fieldgate® Portal on the Internet. A PC or server can be used to operate the VPI Agent.
- No need to reconfigure the IT infrastructure.
- No TCP/IP routing to the Internet.
- Easy configuration.

Client Remote Monitoring Station

- Any PC, workstation, notebook or PDA with a web browser.
- The browser accesses the remote Fieldgate® via the Fieldgate® Portal.
- Any authorized person can access the Fieldgate® Portal from anywhere.
- Automated data transmission from the Fieldgate® to any application is managed by Fieldgate® DA Scheduler (in preparation).

Demo.Inventory.Control.E - Device Overview - Microsoft Internet Explorer

Address: <https://www.vpi-portal.com/remote/25/relay/demomodel/>

AutoRefresh Refresh Endress+Hauser

Overview of connected Devices Switch to Administrator Mode Information & Configuration...

Fieldgate 'Demo.Inventory.Control.E'

Current Time: 31.10.2003 16:11:57 (UTC+2h) XML Data

Tag	Description	Actual Value dd.mm.yyyy hh:mm:ss	Device status/Limit dd.mm.yyyy hh:mm:ss	max. Value min. Value
TANK ONE	SOLVENT A	259.04 lb 31.10.2003 16:11:52	HH 31.10.2003 16:11:52	
TANK ZWO	LOESEMITELE W	123.00 l 31.10.2003 16:11:56	OK 31.10.2003 16:02:28	

Current Time: 31.10.2003 16:11:57 (UTC+2h) XML Data

Done Internet

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System Requirements

VPI Agent

Hardware

Personal Computer	Intel Pentium 1, > 100 MHz
Main memory	≥ 64 MB
Hard disk memory	approx. 30 MB

Software

Operating system	Service Pack / extensions
Windows 95	Y2K bug fixes
Windows 98	Y2K bug fixes
Windows NT 4.xx	SP 6a or higher
Windows 2000	SP 1 or higher
Windows XP	Home/Professional
Linux	≥ 1.3 Java JDK, Superuser

Client Remote Monitoring Station

Software

Web browser	Service Pack / extensions
MS Internet Explorer	≥ 5.5 + SP2 with current security updates
Netscape Navigator	≥ 6.0 with current security updates
Opera	> 6.0 with current security updates
Mozilla	≥ 1.0 with current security updates

Configuration

VPI Agent

Start VPI Agent

- Start the VPI Agent software on a computer in the network by executing "VPIAgent.exe".

Setup VPI Agent

■ Step 1: Enter a valid tunnel identification.

The identification will be provided by Endress+Hauser. It is unique for each connection to the Fieldgate® Portal and may not be changed without Endress+Hauser's consent.

■ Step 2: Secure the tunnel with TLS (SSL).

Type "yes" in order to establish a secure connection to the Fieldgate® Portal, recommended.

■ Step 3: Enter the host name and port number of the VPI-Portal

Host: Type "www.vpi.com", which is the location of the Fieldgate® Portal.

Port: Type "443". 443 is the standard port for secure transmission.

■ Step 4: Internet access through Proxy/Firewall

Type "yes", if you use a Proxy/Firewall in your local network in order to connect to the internet.

Proxy Host: Type in the IP-address or name of your proxy, which will be provided by your system administrator.

Port: Type "443". 443 is the standard port for secure transmission, please make sure that it is the same also in your local network.

After checking the settings, type "yes" in order to confirm.

```

C:\WINNT\System32\cmd.exe
-----
- VPI-Agent Installation
-----

This program will help you to configure the VPI-Agent to create a tunnel
on a VPI-Portal.

-Step 1- Enter a valid tunnel id (a string without spaces)
[tid] ? 25

-Step 2- Secure the tunnel with TLS (SSL) (yes/no)
[nol] ? yes
> TLS

-Step 3- Enter the host name and the port number of VPI-Portal
Host [www.v-p-i.com] ? www.vpi.com
Port [443] ? 443

-Step 4- Internet access through Proxy/Firewall (yes/no)
[nol] ? yes
Proxy Host [firewall] ? xxx.xxx.xxx.xxx
Port [80] ? 443

-----
- Settings
-----
- tunnel id : 25
- VPI-Portal : www.vpi.com:443
- proxy : xxx.xxx.xxx.xxx:443
- connection : TLS
-----

Are these settings OK (yes/no)? _
  
```

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Setup of Fieldgate® in the VPI Agent**■ Step 5: Definition of targets in file “relays.txt”**

Type “add”.

Name: Type in the name of the Fieldgate®.

The name must be unique in the portal. Endress+Hauser will provide the name.

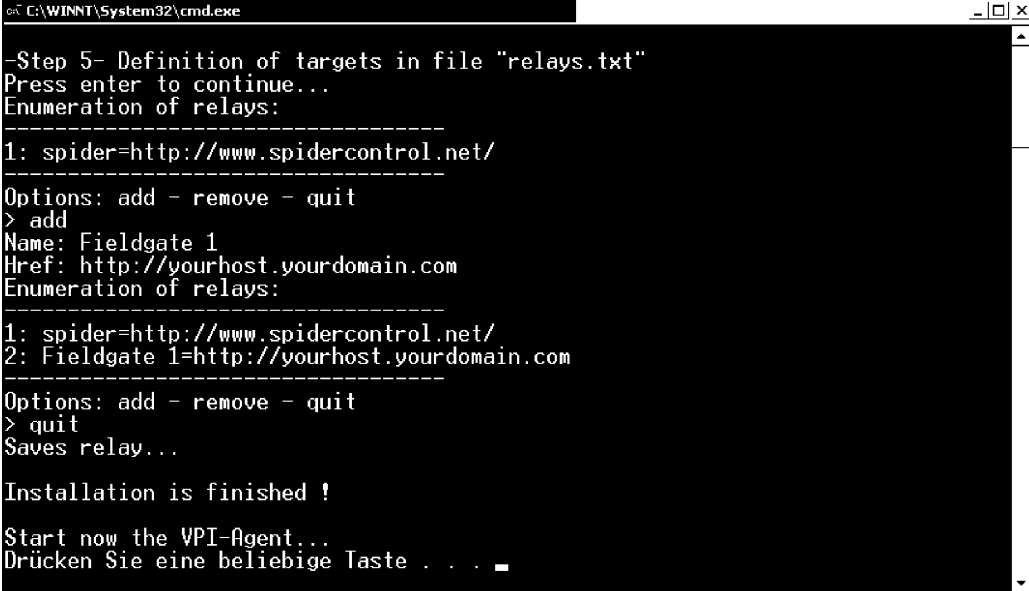
An alias can be defined for the display on the portal.

Href: Type in the identification of the Fieldgate® in your network, name or IP-address, begin with “http//...”.

Type “add” in order to include another Fieldgate® or “quit” when you are finished.

Start the VPI-Agent by pushing any key.

Inform Endress+Hauser, by e-mail to "fieldgateportal@pcm.endress.com", that the VPI Agent has been setup. The Fieldgate® will then be integrated into the Fieldgate® Portal.



```

C:\WINNT\System32\cmd.exe
-Step 5- Definition of targets in file "relays.txt"
Press enter to continue...
Enumeration of relays:
-----
1: spider=http://www.spidercontrol.net/
-----
Options: add - remove - quit
> add
Name: Fieldgate 1
Href: http://yourhost.yourdomain.com
Enumeration of relays:
-----
1: spider=http://www.spidercontrol.net/
2: Fieldgate 1=http://yourhost.yourdomain.com
-----
Options: add - remove - quit
> quit
Saves relay...

Installation is finished !

Start now the VPI-Agent...
Drücken Sie eine beliebige Taste . . . .
```

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Ordering Information

Fieldgate® Portal Service

Order code	Description
52021625	Fieldgate® Portal: Basic Setup Setup of a client on the Fieldgate® Portal in co-operation with the responsible staff at client site. Clarification and setup of users.
52021626	Fieldgate® Portal: Setup Local Network Provisioning of the agent software, integration in the Fieldgate® Portal, clarification of all relevant data, test of connection.
52021627	Fieldgate® Portal: Setup Fieldgate® Integration of a Fieldgate® into the Fieldgate® Portal, assignment to client/user, test of connection.

Operation of the Fieldgate® Portal

Order code	Description
52021628	Fieldgate® Portal Service per Fieldgate®/year Service operation 24/7, setup and modification of users. Connection costs on server side are include.

Accessories

Fieldgate® Data Access

Fieldgate® Data Access software assists with the collection of data from different Fieldgate®. The fetching of data is controlled via entries in the Scheduler. Time control can be via periodic intervals or at user-defined times. Under Windows NT4 / 2000 / XP, collection of the data can be accomplished via a "system service", which runs in the background. The data are saved in CSV format. Further processing of the data can be carried out with, e.g. Excel (in preparation for use with Fieldgate® Portal).

Documentation

Operating Instructions

KA 193F/00/a6

Mounting and installation instructions for Fieldgate® FXA 520. Order number: 52013633.

KA 215F/00/a6

Mounting and installation instructions for Fieldgate® FXA 320. Order number: 52020867.

BA 258F/00/en

Operating Instructions for Fieldgate® FXA 520.

BA 282F/00/en

Operating Instructions for Fieldgate® FXA 320.

BA 273F/00/en

Operating instructions for Fieldgate® Data Access software.

BA 028S/04/en

Operating instructions for Fieldgate® FXA 720.

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