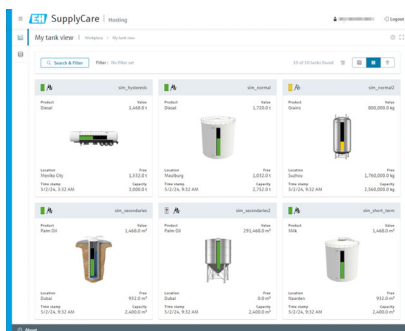# Technical Information

SupplyCare Hosting SCH30

Cloud-based software for inventory management and transparent information flow along the supply chain

Application

SupplyCare Hosting is a web-based software for coordinating the flow of material and information along the supply chain. It is hosted by Endress+Hauser on a redundant server infrastructure.

SupplyCare Hosting gives you complete transparency over inventory levels in tanks, silos and containers, at all times and location-independent.

Your benefits

- Visualization of inventories, with high level of availability anywhere in the company and even on mobile devices, saving you additional costs and investments (e.g. servers, IT administration, technical support, software licenses etc.)
- Based on web server technology, end users can monitor the inventory in tanks, silos and containers either from the workplace or while out and about, independently of the operating system or terminal
- Multilingual user interface with 10 languages supported allowing worldwide collaboration using the same platform
- Improves demand planning and optimizes your inventories
- Enables business processes such as Vendor and Supplier Managed Inventory (VMI, SMI)
- Enables integration and synchronization with other applications within your IT infrastructure
- IT infrastructure within the Endress+Hauser network with full support and redundant servers with state of the art IT security

Endress+Hauser

People for Process Automation

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Description

Application

SupplyCare Hosting is a web-based software for coordinating the flow of material and information along the supply chain. With SupplyCare you have an up-to-date, complete, and clearly displayed overview of levels and material stock, both on site at your own location or in tanks and silos spread all over the world.
Based on the measuring and transmission technology installed on site, the current inventory data are collected and sent to SupplyCare. Critical levels are clearly indicated and you can also receive active information on these levels if required. Calculated forecasts give additional security for replenishment planning.

SupplyCare Hosting runs safely on an application server hosted in the cloud by Endress+Hauser. Users and administrators access the application via a web browser from their desk or while out and about.

Indication of inventory data

SupplyCare determines the inventory levels in tanks and silos at regular intervals. The current and previous inventory data can be indicated at any time.

Data visualization

SupplyCare offers centralized visualization of tank and silo inventories throughout the whole company. The combination of measurement and master data gives the user knowledge to manage the supply chain. Historical and current inventories are displayed in 3 different views (tabular, graphical or geographical) that are adjustable per user.

Forecasting

The software makes predictions based on historical inventory consumption and thus supports the user in planning deliveries and disposals.

Reporting

With SupplyCare, you can create flexible, configurable reports in formats such as Excel, PDF, CSV and XML with the measured value history and additional information that can be reused by other systems.

Alarm and event management

SupplyCare shows events in the process of the customer such as a drop to below safety stocks or plan points. The system also highlights a technical problem, e.g. connection problems. Additionally, notifications can be sent to the relevant persons per e-mail.

Logistics and analysis

Furthermore, there are additional features to analyze your supply chain and to improve delivery and disposal planning.

Data exchange with other systems

SupplyCare provides interfaces, such as a REST API for example, to connect with other systems. Both the exchange of measured values and the synchronization of important master data are available for optimal use of the data.

For more detailed information on functionality and the look and feel of SupplyCare, please take a look at the **User interface and functions** section → 🖹 4.

Application packages

SupplyCare is modular in design and can be ordered depending on requirements.
The software modules are assembled to the **Monitoring** and **Logistics** application packages.

Monitoring　　The **Monitoring** application package is the standard package. It contains the necessary software modules to cover standard use cases such as inventory monitoring, event management and reporting.

Logistics　　The **Logistics** application package contains all the software modules and functions that are contained in the **Monitoring** application package, plus a number of additional modules for Supply Chain Management. The additional software modules are **Scheduling**, **Totaling**, **Analysis** and **Geographical visualization**. Software modules that are contained in **Logistics** only are indicated with a relevant note.

User interface and functions

User interface　　The user interface supports the following 10 languages:
- German (DE)
- English (EN)
- French (FR)
- Italian (IT)
- Japanese (JA)
- Portuguese (PT)
- Russian (RU)
- Spanish (ES)
- Turkish (TR)
- Chinese (ZH)

The user interface language and other settings are detected automatically based on the browser settings.
Displays are loaded very quickly, can be scaled, minimized, maximized and moved around so that the operator can set the desktop exactly as required.
The SupplyCare user interface can be used via a web browser on various terminals, from smartphones or tablets to laptops and desktops to large screens.
Navigation within the software is easy thanks to the logical and user-dependent menu structure, guided configuration and extensive menus and wizards tailored to your use cases.

Tank overview in tabular form　　This start screen provides an overview in tabular form of the tanks and relevant data such as status, name, location, current value of the product etc. This overview table can be customized to the user's requirements by selecting different data for display and filtering from a wide selection of data.

- **Overview**: The tanks, objects and silos assigned to the user are displayed in this overview table, together with a relevant and highly customizable data set. Variable filters and other table display options provide quick access to the tank in question.
- **Detailed view**: Once a tank is selected, more detailed information on the tank such as an inventory chart, the tank's capacity and set limits, or details on tank location and service status are accessible and are sorted into a number of tabs.
- **Secondary values**: A range of measuring instruments allows additional measured variables (secondary) to be recorded in addition to the primary variable. A maximum of one primary value and eight secondary values can be assigned to a tank.
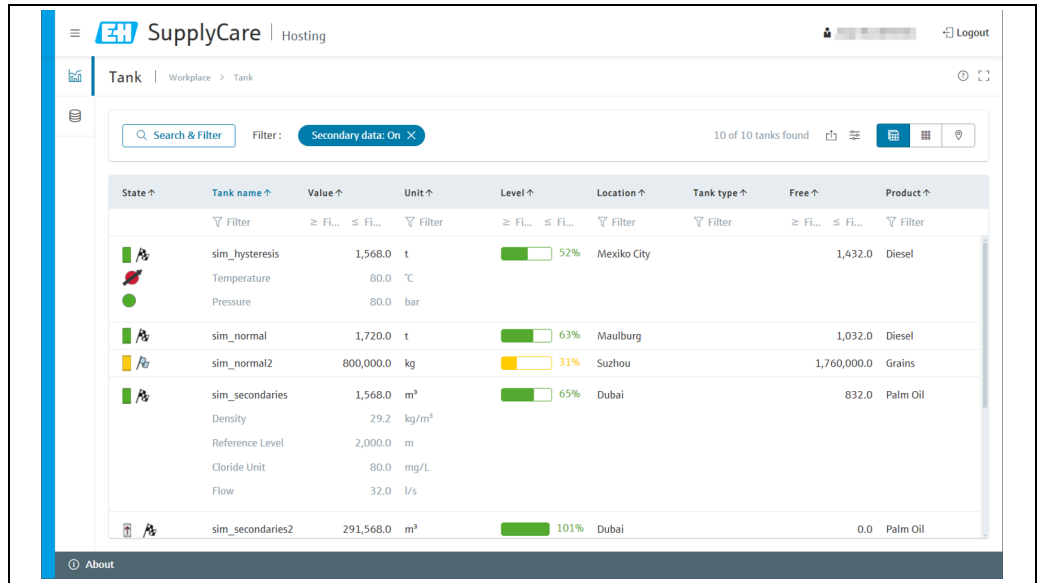
BA00050SEN_Arbeitsplatz_Tank_2_V40

Tank details

The detailed views in **Workplace Tank**, **My tank view** and **Map** provide further information such as:
- **Tank details**: additional information such as tank name, tank type, tank status, capacity, optimum, location, time zone, time stamp, level, unit, data sources, product, supplier, buyer, plan point, ship point and safety stock.
- **Inventory chart**: displays the past inventory change pattern and a calculated forecast for inventory control. In addition, historical measured data can be displayed for the 8 secondary values.
- **Event details**: displays details on the currently applicable event, e.g "safety stock reached".
- **Location details**: displays information on the location such as company, street, city, zip code, state, country and name, as well as details on the manager such as surname, first name, e-mail, fax, mobile number and phone number.
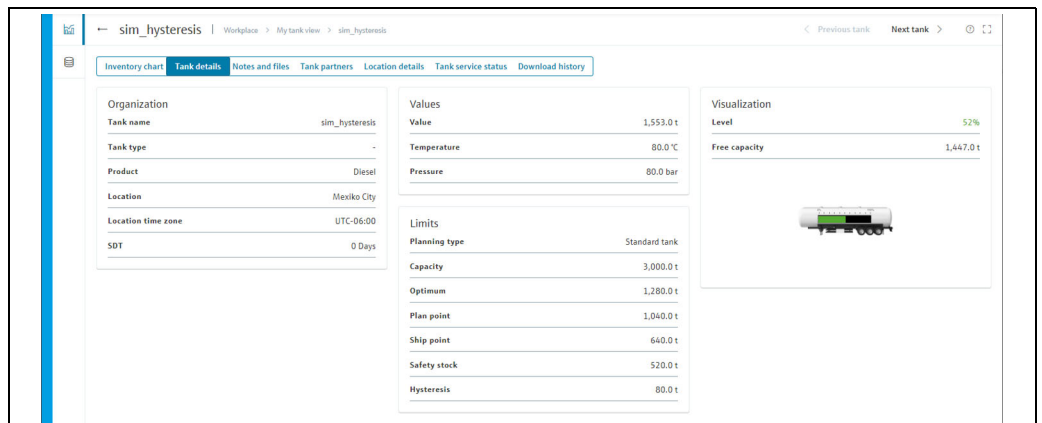
BA00050SEN_Tank_Tankdetails_V40

'My tank view' in graphical form

The **Workplace My tank view** provides a graphical overview showing the tanks or silos assigned to the user, with up to 10 selectable items of additional information or other measured values. Various filter functions allow you to display only tanks for a particular tank group, product or location.
Clicking on the tank icon brings you directly to the tank details. See Section **Tank details** → 📄 5
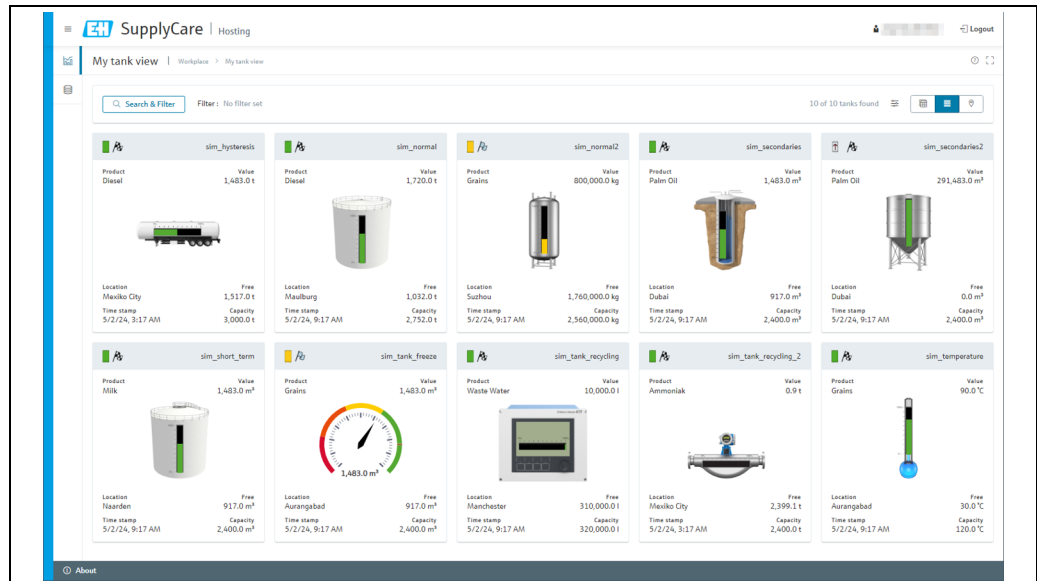
BA00050SEN_Arbeitsplatz_Tankuebersicht_V40

Editing events – Workplace Event

An event is triggered if a limit value is undershot (plan point, ship point, safety stock) or unexpected level changes occur. The weighting is derived from the limit value, i.e. reaching the plan point is categorized as not critical (low) while reaching the safety stock level is regarded as very critical (high). Once an event has been generated, the user can change the status to **Acknowledged** or **In process**. To make it easier to track events later, the change is stored with a time stamp and user name. If a critical limit value is reached, determined by another measurement, the status of the event is set to **Open**. If an inventory that is above the plan point is detected for standard tanks, and if an inventory that is below the plan point is detected for recycling tanks, the event assumes the status **Done** and no other activities are required.
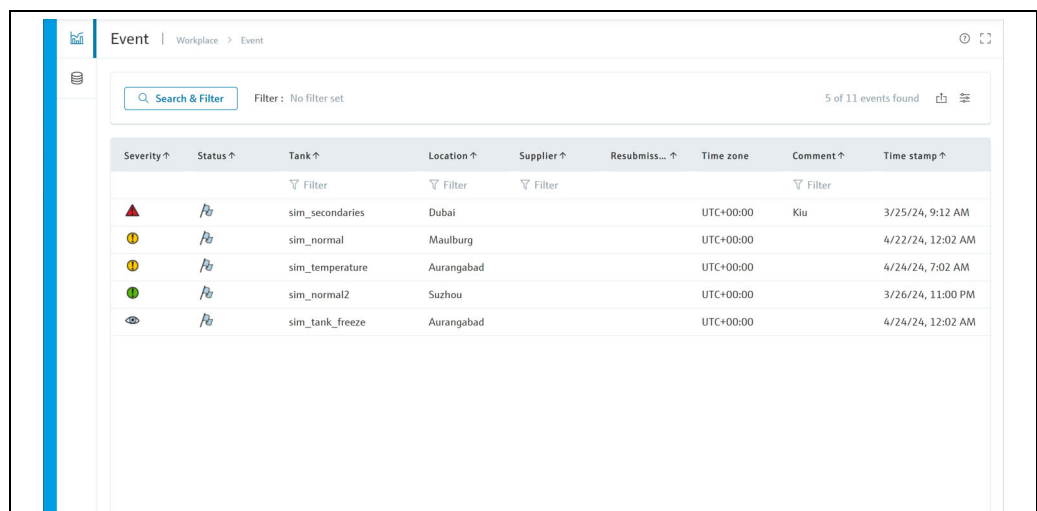

BA00050SEN_Arbeitsplatz_Ereignis_V40

Planning delivery and disposal – Workplace Scheduling

SupplyCare Hosting enables detailed planning of delivery and disposal of material, as well as the monitoring of these tasks. When a new delivery/disposal is created, the system checks whether the delivery/disposal is planned too early or too late. The forecast data determined by SupplyCare are used to check the information. The user can either reschedule the delivery/disposal which is too late/early or confirm this as an early or late delivery/disposal. SupplyCare monitors the deliveries and disposals daily. If it detects an early or late delivery/disposal, this delivery/disposal can be confirmed. If it detects a missing delivery/disposal, this delivery/disposal can be marked as fulfilled.

[i] This software module is contained in the **Logistics** application package only.
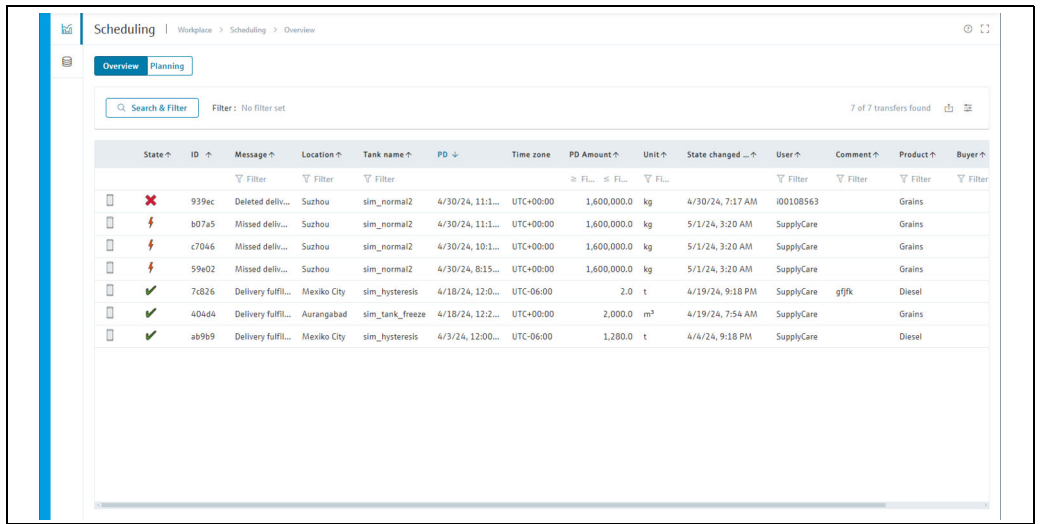
BA00050SEN_Arbeitsplatz_Planung_Uebersicht_V40

Totaling – Workplace Totaling

The **Totaling** workplace allows you to add up values, e.g. to establish free capacity at a location. The totalized **Level** is then represented graphically. Tanks, recycling tanks and aggregated tanks can be included in a calculation.
Set filters such as location, tank groups or personal favorites can be used to add up certain tanks according to criteria.

[i] This software module is contained in the **Logistics** application package only.
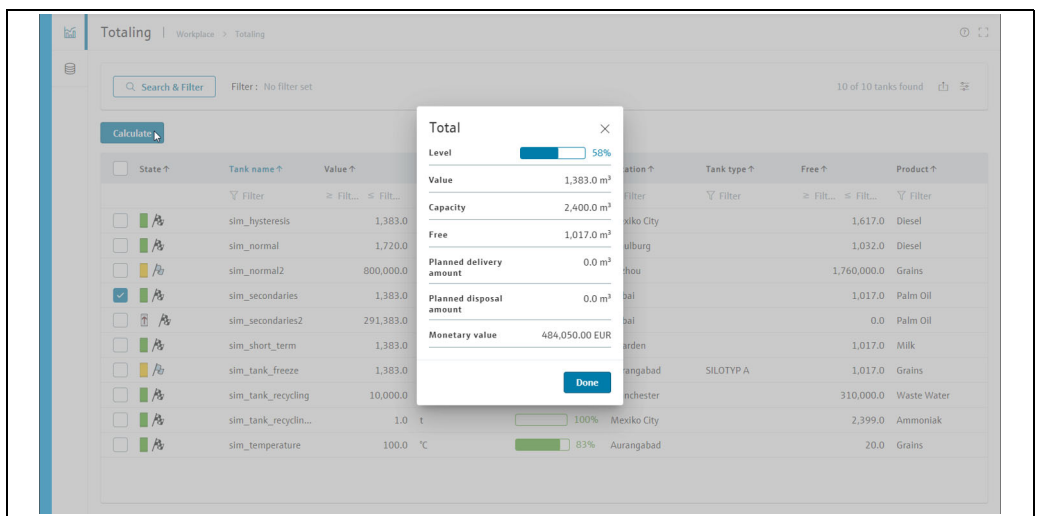
BA00050SEN_Arbeitsplatz_Summierung_Pop-Up_V40

**Viewing analysis –
Workplace Analysis**

The **Analysis** workplace allows the user to view important indicators for the inflow and outflow of the individual tanks as data and charts. You can use these data and charts to analyze past cycle patterns and use them as the basis for future planning. You can export all the information to an Excel spreadsheet. In addition, it is also possible to print out the charts.

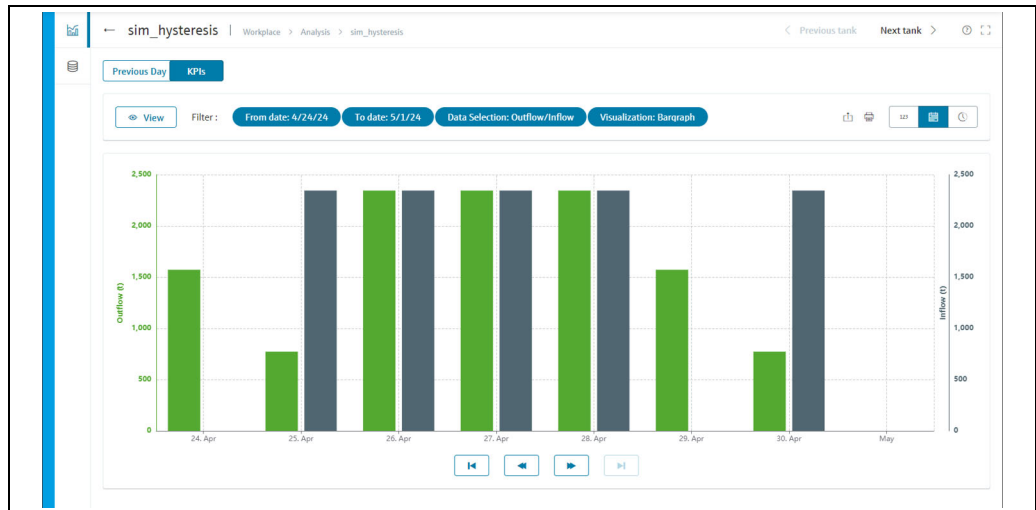ℹ️ This software module is contained in the **Logistics** application package only.

BA00050SEN_Arbeitsplatz_Analyse_Diagramm_V40

Viewing tank locations on the map – Workplace Map

You can use the **Map** workplace to get an overview of the locations of the individual tanks on Google Maps. The tanks can be filtered by tank name, tank group, product, location and other master data. If you call up a tank, the widget opens from the graphical tank view. The widget shows the level in the tank and additional information such as product, capacity and time stamp of the last measured value. Clicking on the tank icon brings you directly to the tank details. See Section **Tank details** → 📄 5

ℹ️ This software module is contained in the **Logistics** application package only.
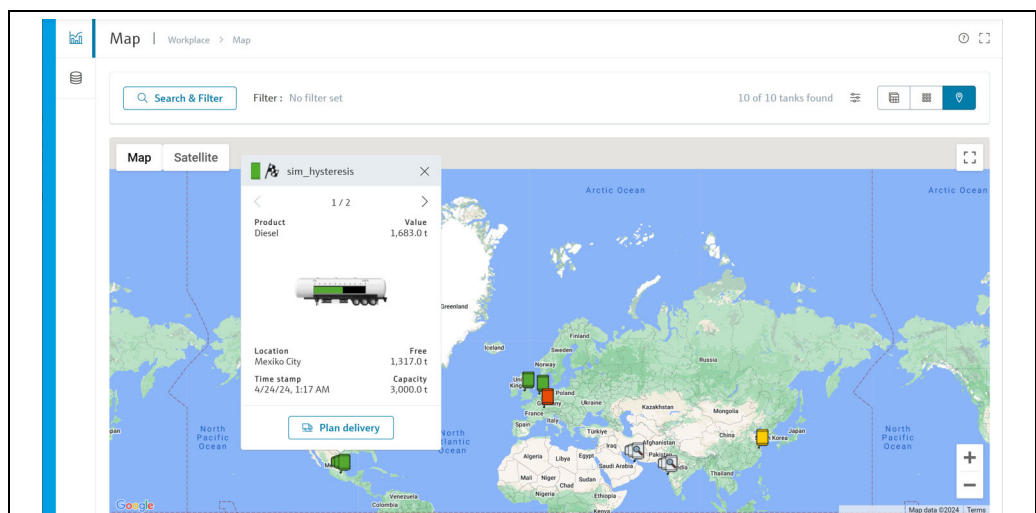
BA00050SEN_Arbeitsplatz_Karte_Tankvorschau_V40

User management

User roles

The system allows access only with a user name and password.

Users and their privileges are entered through the **User role** menu item. Every user role includes a couple of features and privileges. You can decide which rights should be assigned to each user by specifying a user role for each user. Individual users' access to specific groups of tanks, silos and containers can be managed via the master data.

SupplyCare Hosting offers the following user roles: authorization to create and edit master data, operator, read only privileges and scheduler.

Configuration

Configuration of master data

Master data are the basis of every inventory management system. The following master data, for example, can therefore be managed via the **Configuration** menu:

- User
- Tanks
- Aggregated tanks
- Tank types
- Tank groups
- Locations
- Companies
- Products
- Linearizations
- Units

Many of the settings are critical and access should normally be limited to certain personnel.

Configuration of reports

Using the Report wizard, you can create reports in various file formats:
Excel (XLS), TXT, PDF, CSV or XML.
Reports can be distributed by directory, by HTTP, by FTP or by e-mail.

Technical system overview

Installation and scope of delivery

No installation is needed as the software runs as a cloud service within the Endress+Hauser infrastructure. Only an Internet connection with a standard web browser is required to operate the software. System requirements → 🖹 11

Redundancy and availability

SupplyCare Hosting offers reliable and safe hosting of your data.

By operating redundant servers in different locations, we secure the application against unwanted downtime.

Redundant critical application components make the system resilient and fault-tolerant. The continuity of customer business is thus effectively protected as the system will continue to operate even if, however unlikely, single components should fail.

If not explicitly agreed otherwise, the conditions for availability specified in the associated service level agreement apply.

Security

State-of-the-art security mechanisms protect the integrity of data communicated between SupplyCare Hosting, the interfaces and data sources.

Communication on the Endress+Hauser web server and Hosting API interfaces is carried out via HTTPS. For the data interface, the security level depends on the communication interface selected and on gateway-embedded technologies.

All access to data inside SupplyCare Hosting, as well as the execution of operations, requires authorization.

To perform operations inside SupplyCare Hosting, a user must have the following:
- The required authorization via privilege to perform an operation (role)
- The required authorization via privilege to access the relevant object (authorized contract)

| System overview | **Responsibility transfer point** |

Limits of the Endress+Hauser domain and
responsibility for the data availability
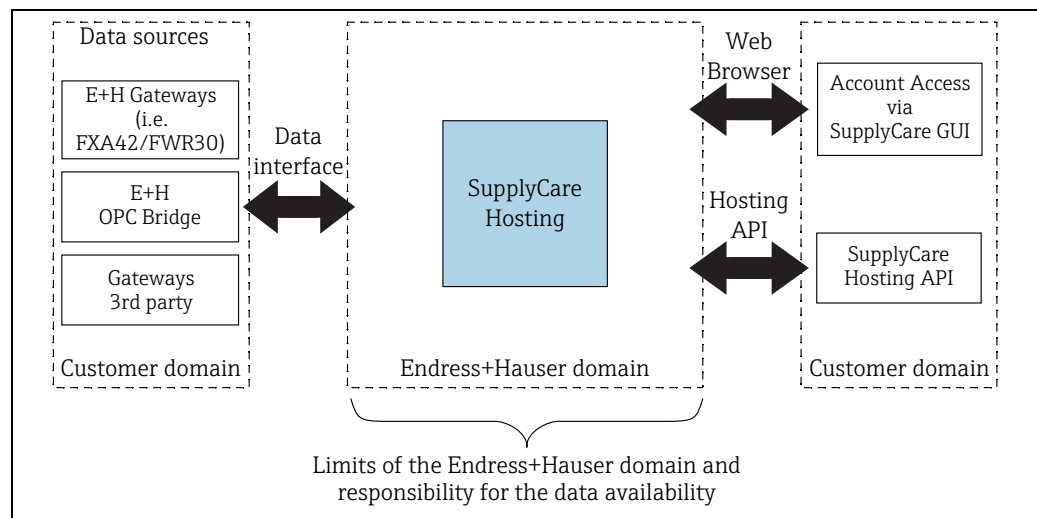
A0037087-EN

Customers use the Internet to connect to the Endress+Hauser hosting system. The responsibility transfer point for data communication between the customer's IT infrastructure and the hosting system operated by Endress+Hauser is described in the diagram above.

Endress+Hauser is responsible for the following deliverables and services:

- Operation of the SupplyCare Hosting application
- Process flow at the interfaces between the Endress+Hauser domain and the customer domain according to relevant protocols and definitions, as far as this is within the sphere of influence of Endress+Hauser. Such processes are, for instance, storage, processing and delivery of data.

Endress+Hauser is not responsible for malfunction occurring outside the Endress+Hauser domain (e.g. Internet connection problems, IT infrastructure malfunction on the customer's side etc).
Interfaces which connect the Endress+Hauser domain with the customer domain can be the following:

- Data interface
- Endress+Hauser web server (accessed via a web browser)
- Hosting API

The interfaces have the following features and functions:

- The **Data interface** represents the boundary of the domain for incoming data. Data interface acts as a collective noun here for different kinds of interfaces which can have the following form:
  – M2M interface for machine-to-machine communication
  – Endress+Hauser mail server for e-mail
  – Raw data queue for FTP and HTTP
- The **Endress+Hauser web server** provides the computer environment for the graphical user interface of SupplyCare (Hosting), which is used by customer users to access their inventory data and individual configurations. The Endress+Hauser web server is located inside the Endress+Hauser domain and is accessed by means of a web browser.
- The **Hosting API** enables data exchange between SupplyCare Hosting and a customer system (e.g. ERP system). This primarily focuses on the use cases of measured data exchange and master data synchronization (tanks, locations, products etc.). For more information, see the Special Documentation for SupplyCare Hosting API (SD03269S).

| "Data interface" interface options | **M2M** |

Option 1 and **preferred method**: Gateways push their measured data directly to the Endress+Hauser hosting solution via a machine-to-machine (M2M) interface. This method is preferred as it does not require any additional infrastructure or accessories for stationary gateways on the customer's side except for an Internet connection with the usual permissions for outgoing traffic on HTTP/HTTPS ports.

Mail

Option 2: The gateways transfer measured data to SupplyCare via e-mail to the Endress+Hauser mail server, using the SMTP protocol.
SupplyCare Hosting collects the e-mails and extracts the measured data that are embedded inside the e-mails.
The SMTP server is not a part of the standard scope of delivery.

HTTP polling

Option 3: The gateways are polled directly by SupplyCare in order to retrieve the delivered measured data. As a prerequisite, the gateways must be available via Internet with a static IP v4 address.
Configuration of a static IP address is not a part of the standard scope of delivery.

"Hosting API" interface options	**Hosting API** Option 4 and **preferred method**: The SupplyCare API services are based on HTTP REST and therefore the standard methods such as GET, POST, PUT, PATCH and DELETE are used. The data serialization format used for any request to the API or responses from the API is JSON.
Transmission from gateways	In typical inventory management applications, data are transmitted several times per day. A higher data transmission rate (= shorter intervals) can lead to high data volumes and suitability for higher transmission rates must be checked for each gateway. For this reason, Endress+Hauser reserves the right to reset transmission and measuring intervals shorter than 15 minutes back to 15 minutes if the setting has been made without consultation with Endress+Hauser. If higher data transmission rates are required, please contact Endress+Hauser: www.addresses.endress.com

System requirements

Recommended Specifications	**Browser for desktop:** • Microsoft® Edge 128 (or later) • Mozilla Firefox 130 (or later) • Google Chrome™ 128 (or later) **Browser for mobile devices:** • Google Chrome™ 128 (or later) • Safari® on iOS 18 (or later) These are the officially supported browsers that we recommend for the SupplyCare Hosting application. The use of any other browser version or technology may lead to limited functionality and visualization. The minimum supported resolution is 375×667 pixels. The resolution selected for the browser determines how the SupplyCare user interface is displayed and not the maximum possible resolution of the terminal.

Information required from customers

Information about application

To create an account for a customer, Endress+Hauser needs information about the customer's application. Endress+Hauser uses checklists to query the information required about tanks, gateways, users and other topics. Depending on the agreement, either the customer or Endress+Hauser can create the tanks and set up the gateways.

By concluding a license agreement for SupplyCare Hosting, the customer agrees to completing the checklists accurately and truthfully and to provide the required information to Endress+Hauser.

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Additional documentation

Operating Instructions

Document	Valid for	Contents
BA00050S	• SupplyCare Hosting	Operating Instructions Languages: • English • German
SD03269S	• SupplyCare Hosting API	Special Documentation Languages: • English • German

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