User’s Manual
ENTIS R101.1
PREFACE

This manual describes how to operate the ENTIS system. It has been written for operators as well as system supervisors to provide them with all the information required to operate the system.

For installation details refer also to the ENTIS Installation Guide.

Safety and prevention of damage

‘Cautions’, and ‘Notes’ have been used throughout this manual to bring special matters to the immediate attention of the reader.

- A Caution draws attention to an action which may damage the equipment.

- A Note points out a statement deserving more emphasis than the general text, but does not deserve a “Warning” or a “Caution”.

Additional information

Contact Honeywell or its representative, if you require additional information. Also, refer to the list of related documents in Appendix for more information.

Legal aspects

The information in this manual is copyright property of Honeywell, Netherlands.

Honeywell disclaims any responsibility for personal injury or damage to equipment caused by:

- Deviation from any of the prescribed procedures
- Execution of activities that are not clearly documented
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INTRODUCTION

ENTIS is a unique Tank Inventory Management System developed for Windows 10 Enterprise and powered by Experion platform to display Tank inventory data.

Real Time Inventory

ENTIS is a Windows 10 Enterprise application. Data is retrieved via dedicated Communication Interface Units (CIU’S) and processed through to the open ENTIS database. Different screens are available for inventory management, which are hosted in Experion environment. These include bar graphs, tabular data, iconized tanks, and a whole range of modules such as trending, report printing, and a “what if”...tank calculator.

Numerical & Graphical Display

The graphical displays provide a quick overview of tank data. The numerical displays can be customized to suit your own particular needs. These displays can be either tank or group related. Several graphical displays are also available, and tank images can be customized per tank if required.

Operation

ENTIS is mouse driven and has a logical, easy to remember user interface. A change in colour on the tank display immediately informs the operator whether the tank is being filled or emptied.

Networking

The network facilities of the Experion system allow you to integrate ENTIS into your plant’s networks.

Alarm system

ENTIS provides you with an array of programmable alarm set points. Privileged users can create their own alarms for all measured and calculated data. During inactive periods, tanks can be put into a leak detection mode. Alarms and acknowledgements, together with all tank information, are stored and recorded for future review and traceability.
Hot Standby & Redundancy Support

The ENTIS system can be enhanced for use in critical applications with hot standby and CIU redundancy support. Redundancy support can even cover the unlikely event of a network failure, providing sustained and reliable data to your management system. After the occurrence of an error the second CIU will automatically start and take over the lost functionality. During the automatic start, all gauge data will be rescanned and recalculated to ensure data reliability.
INTERFACE GUIDELINES

The ENTIS user interface consists of a set of inter-related graphical objects together with a set of rules governing their deployment, such as windows, dialog boxes, task icons, colours and others.

Although ENTIS is a Windows application, there are certain additional conventions used in ENTIS that will be described in this chapter. This chapter also describes a basic set of rules to help the user learn how to use ENTIS.

Help

ENTIS supports the displaying of the help manual. Navigating to the Help menu item will open the pdf version of the ENTIS User Guide.

Data presentation

Measured data is always presented as green text on a black background. Calculated data, such as inventory data, is presented as black text on a grey background. Measured data in alarm is shown as black on red background, and then red on black background after the alarm has been acknowledged.

Status information is always in yellow.

‘Stroked through’ data indicates invalid data.

Units are shown in blue, when the setting is non default.
Data Status

Measured and calculated data is indicated by a status sign. The statuses are shown in the following table:

Table 1: Data Status

<table>
<thead>
<tr>
<th>Sign</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Data is actual and approved</td>
</tr>
<tr>
<td>&amp;</td>
<td>Data is manually overwritten</td>
</tr>
<tr>
<td>S</td>
<td>Data is stored and not approved</td>
</tr>
<tr>
<td>#</td>
<td>Data is not approved</td>
</tr>
<tr>
<td>?</td>
<td>Data has reduced accuracy and is not approved</td>
</tr>
<tr>
<td>F</td>
<td>Data is in fail</td>
</tr>
<tr>
<td>K</td>
<td>Data is killed</td>
</tr>
<tr>
<td>^</td>
<td>Data is over range</td>
</tr>
<tr>
<td>V</td>
<td>Data is under range</td>
</tr>
<tr>
<td>U</td>
<td>Data is uninitialized</td>
</tr>
</tbody>
</table>

S&W, Liq/Vol Ratio and Molar Weight are always manually entered
SECURITY CONSIDERATIONS

ENTIS runs on the Experion HS platform; therefore, Experion’s security recommendations should be followed in any ENTIS deployment.

Experion HS provides a comprehensive Network and Security Guide (ID: EHDOC-XX75-en-510A) that should be reviewed prior to an ENTIS deployment.

In addition to the information provided in that manual, this section provides some additional security-related details.

This information is ENTIS-specific and is meant only to augment the Experion documentation.

Signed Assemblies

Digitally signing files allows users to confirm that those files were provided by Honeywell.

Honeywell has digitally signed the assemblies that it provides with ENTIS.

Note that this does not include third-party assemblies that are not maintained as a part of the ENTIS product line.

User’s can confirm that their ENTIS assemblies are signed by bringing up the assembly properties via Windows Explorer.

Users can check for signing by right-clicking on the dll/exe, and selecting Properties from the context menu.

If the ensuing dialog has a Digital Signatures tab, and there is a “Honeywell Limited” signer listed, then your assembly has been properly signed by Honeywell.

Network Shares

ENTIS does not create any additional network shares beyond what Experion configures, and documents, in their Network and Security Guide.
Access Control List

ENTIS will set up the appropriate access controls on its files for the application to run securely.

This ACL configuration step is run automatically as a part of the installation process.

In addition to the ENTIS-specific ACL settings, ENTIS also relies on the standard Experion ACL implementation, as is described in the Experion Network and Security Guide.

Backup & Restore

For the backup and restoration process for the node, please refer to the following sections of the Experion PKS Backup and Restore User's Guide, EPDOC-X111-en-431K on Honeywellprocess.com. See back page for web links

1. Backups on a physical node.
2. Backups on a virtual node.
3. Restoring Physical Nodes.
4. Restoring Virtual Nodes.
TOOLBAR

The toolbar is present on Experion station view. It offers a fast navigation tool for within Entis. Based on access level, user can navigate to respective screens by clicking on the menu icons.

![Figure 1: Tool bar](image)

**Status bar**

The status bar includes the following display areas. The panes, appear in the following order:

**DateTime**

It will display current system date and time.

**Alarms**

Whenever an alarm is raised, the alarm icon will start blinking in red. Click on icon to open alarm display.

**System**

If it is blinking in blue, system status is ok, any system related issue comes up, it will start blinking in red. Click on it to open system status view.
**Message, Alert**

Any message or alert logged by experion system will be available here.

**Server Name**

Server to which experion station is connected is displayed here, click on icon to view details

**Station Name**

Connected station will be displayed here.

**Role**

It will display the user role, click on it to enter the credentials and change the role.
MANAGE DISPLAYS

MANAGE GROUP

To ease the access of individual tanks or subsets of tanks, tank groups can be defined.

These tank groups contain a fixed subset of the tank park.

Manage Groups can be started from either the Group View or Group Detail screen.

Window layout

Figure 3: Manage Groups

This window displays the following main sections:

- At the left site, all created tank groups.
- In the middle part the available tanks to be added to the tank group.
- At the right site the tanks which are member of the selected tank group.
How to create a group

1. Log on as SUPV or higher.
2. Click the Manage Groups icon from either Group View or Group Detail.
   The Manage Groups window opens
3. Click on Create: An edit field opens where you can enter the tank group name.
4. Enter the tank group name and click Create: The tank group is added to the list of created Tank Groups.
5. Select in the middle part of the screen the tanks that you want to add to the group.
6. Click on >: The selected tanks are moved from the middle part to the right part of the screen.
7. Click OK: The window closes; now the new created group can be selected in the Group selector dropdown box on the various UI screens.
8. Similarly, to remove tanks from a group, select the tanks in the right part of the screen and click on <.

Note that the “All” group is default available and cannot be removed or adapted.
MANAGE VIEW

The Group Detail task displays tank inventory data of multiple tanks in a tabular and grid format. Tanks are organized in rows, while the entities are displayed in columns just like a spreadsheet.

This window enables the user to customize the view that defines the columns to be displayed in Group Detail. The first column (Tank name) is fixed.

A number of predefined views are available; it is also possible to create new views.

The predefined views can be adapted, but not deleted. New create views can be adapted and deleted.

Manage Views can be started from the Group Detail screen.

Window layout

This window displays the following main sections:

- At the left side, all available views.
- In the middle part the available entities to be added to the view.
- At the right side the entities which are available in the selected view.

Figure 4: Manage Views
How to create a view

1. Log on as SUPV or higher.
2. Click the Manage Views icon from Group Detail. The Manage Views window opens.
3. Click on **Create**: An edit field opens where you can enter the view name.
4. Enter the view name and click **Create**: The view is added to the list of available views.
5. Select in the middle part of the screen the entities that you want to add to the view.
6. Click on >: The selected entities are moved from the middle part to the right part of the screen.
7. Click OK: The window closes; now the new created view can be selected in the View selector dropdown box on Group detail.
8. Similarly, to remove entities from a view, select the entities in the right part of the screen and click on <.

Note: the order of the entities can be changed by simply drag and drop in the right part of the Manage Views screen.
MANAGE FILTER

This window offers the possibility to define a filter on the tanks to be displayed in a Tank Group.

A few examples:

- Show only tanks with a certain Product name.
- Show only tanks with a Product temperature above a certain value.
- Show only tanks with a Product level between 2 values.
- Show only tanks with Moving status not equal to stable.
- etc

Manage Filter can be started from the Group Detail screen.

Window layout

![Manage Filters Window](image)

This window displays the following main sections:

- At the left site, all created filters.
- In the middle part the entities that can be used in a filter.
- At the right site the configured parameters (Operation, Value) for the selected Filter.
How to create a filter:

1. Log on as SUPV or higher. (see note 1)
2. Click the Filter icon from Group Detail. Then Manage Filters.
3. Click on Create: An edit field opens where you can enter the filter name.
4. Enter the filter name and click Create: The filter is added to the list of created filters.
5. Select in the middle part of the screen the entity that you want to be used in the filter.
6. Select in the right part of the window the Operation and the Value.
7. Click OK: The window closes; now the new created filter can be selected in Group detail by click on Filter, then select the required filter.

Notes:

When logged on as Operator, a filter can be selected to be viewed, but not created or adapted.

When you want the tanks to be displayed with a numeric value between 2 values, select then for the Less parameter a higher value than for the More parameter.

Example: A filter on Product level less than 6 m and more than 5 meter, displays the tanks with Product level between 5 and 6 m (Product level > 5m AND < 6m), and a filter on Product level less than 5 m and more than 6 meter, displays the tanks with Product level less than 5 m or more that 6 m (Product level < 5m OR > 6m),
GROUP VIEW

The Group View task displays a group of Tanks with smaller pictures. All the pictures include a bar graph in which the height is an indication of the amount of product in the tank. The color of the bar graph is as per the configured color per Product name.

The Tank icons are configurable per Tank. (configuration done in the CIU888 Service tool)

Also the TOV value is displayed.

Window layout

![Figure 6: Group View](image)

How to select the Group View window

1. Group view is the default window when ENTIS is started. Alternatively, you can select Group view from the menu or from the icon in the toolbar.

2. Select the required group from the Group selection dropdown box.
GROUP DETAIL

The Group Detail task displays tank inventory data of multiple in Tanks in a tabular and grid format. Tanks are organized in rows, while the entities are displayed in columns just, like a spreadsheet.

In addition, this window enables the user to make use of additional functionality such as Delta column (Option) and the extended Description field. Dimensions are user-definable and displayed in the column header.

The user can create his preferred views via the Define View task.

Windows layout

The window presents Tank data in spreadsheet format. Data displayed depends on the selected format. Spreadsheet data displays only live data. Both values and, if applicable, status are displayed. Row sorting by clicking the mouse on the column header is possible.

A user definable number of columns, measured from the first column, can be identified as fixed column. Fixed columns do not scroll horizontally.

Figure 7: Group Detail
How to select a group detail

1. Proceed as follows:
2. Click on the ‘Group Detail’ tab or ‘Group Detail’ icon available in tool bar
3. The ‘Group/Tank’ window will appear
4. Select Group from the Dropdown
5. Tank data will be appeared in spreadsheet format
6. ‘All’ indicates that all the groups will appear
7. Changing to another View can be done by the view dropdown list

Column width: The current size is stored whenever the user selects another view, or the window is closed.

1. Change to any group…. just a mouse click!
2. How the data is displayed, depends on the selected view
3. You also can adjust the width of a column
4. Data can be sorted by clicking on the header of any column
5. Color indication of the movement status
DELTA COLUMN

The Delta column displays the difference between the actual value and the start value. This feature will enable the operator to verify tank operations with real-time data. Delta values are available for GOV, TGSV, Total Mass, NSV, Level, GSV and TOV.

The Delta column is only available in the Group Detail window. The column can be enabled via the Define View window.

Window Layout

When the Delta column is available in Group Detail a click on the Delta column header gives the following pop-up menu:

![Delta Column](image)

**Figure 8: Delta Column**

How to select Delta Column

A right mouse click on the delta tank entity gives the following menu:

- **Start Tank**: When clicked on this field the delta calculation for the selected tank (row) will be started or restarted
- **Stop Tank**: When clicking on this field the delta calculation for the selected tank (row) will be stopped and blanked
**Group Detail**

**Start Group** When clicked on the field the calculation for a group of tanks is started

**Stop Group** When clicked on the field the calculation for a group of tanks is stopped and blanked

**Delta Report** The actual situation of the delta values will be printed in form of report

![Image](image-url)

**Figure 9: Delta Column Group**

![Image](image-url)

**Figure 10: Delta Column Report**
CRITICAL / OPERATION PAL COLUMN

This column can be used to display PAL statuses in Group detail.

Critical PAL corresponds with Urgent priority alarms and Operational PAL with High and Low priority alarms.

Windows Layout

Figure 11: Alarm Column

How to select a Alarm column from group detail

To view, the columns must be added through the “Manage view” option in Group detail.

1. Create View from Group detail

2. Select Critical PAL and Operational PAL columns from Available Entity list.

3. Click on Ok button
4. When View is selected in Group detail, the same columns will be available in the screen.
- Hi and HiHi alarms with Urgent priority are indicated in the Up arrow from the Critical PAL field.

- Lo and LoLo alarms with Urgent priority in the Down arrow from Critical PAL.

- Hi and HiHi alarms with High or Low priority in the Up arrow from Operational PAL.

- Lo and LoLo alarms with High or Low priority in the Down arrow from Operational PAL.

The next screenshot shows the effect in Group detail when a High alarm is active with Low or High priority for tank `<Tank Name>` along with corresponding tooltip.

![Figure 14: Alarm Column_HA](image_url)
When the alarm is acknowledged only the tooltip changes

![Alarm Column_HAAck](image1)

**Figure 15: Alarm Column_HAAck**

When then additionally a High alarm with Urgent priority is activated

![Alarm Column_UA](image2)

**Figure 16: Alarm Column_UA**
Similar Low alarms are indicated with the "down" arrow; in the next screenshot <Tank name> has an active Low alarm with Low priority and one with Urgent priority.

![Alarm Column_LA](image)

**Figure 17: Alarm Column_LA**

The number indicates the number of alarms from this type; For example, when for tank <Tank name> additionally a Low alarm with Low or High priority is activated.

Finally, for the same tank also a High alarm is activated with Low or High.
REMARK COLUMN

This column enables the user to enter additional text in the Remarks field. The text can be entered by a left mouse click on the edit icon. See example below. This field is only available on the Group Detail window.

Windows Layout

![Figure 18: Remarks Column](image-url)
How to select remark column from group detail

To view, the remark columns must be added through the “Manage view” option in Group detail.

1. Create View from Group detail
2. Select remark column from Available Entity list.
3. Click on Ok button
4. Select View in Group detail screen
5. Left mouse click on remark field edit icon for selected tank
6. Save remarks
7. Remark will be available for the selected view in Group Detail
TANK DETAIL

Tank Detail is a task that shows all measured and inventory data for one particular tank.

The screen provides an excellent overview of all relevant data and is updated continuously.

To show different tanks a combo box is available to change tank selection. This combo box shows all the tanks available in the selected group.

Data presentation

1. Measured data is always presented as green text.
2. Calculated data, such as inventory data is presented as black text.
3. Status and Validity information is available in circular indicators.
4. Units are shown in black after the status and validity symbols.

Window layout

The tank detail window consists of two main parts:

ToolBar

The toolbar shows a ‘Tank Detail’ icon at the left-hand side. The dropdown box allows you to choose and view another tank in the same group. Tooltips are available for tank oriented task.

Graphical pane

Display of entities (measured and calculated) belonging to the selected tank.
The time to fill is calculated from available TOV/flow TOV. The time to empty is calculated from available room/flow TOV.
Tank detail window for fixed roof tanks

This window selection is based on tanks with no corrections.

Figure 20: Tank Detail
Tank detail window for fixed & floating roof tanks

The window selection is based on tanks with S&W and floating roof corrections.

![Figure 21: Tank Detail Floating](image-url)
Tank Detail

Tank detail window for spheres

The window selection is based on tanks with vapour room corrections (gas volume calculations).

![Tank Detail Sphere](image)

Figure 22: Tank Detail Sphere
How to select the Tank Detail window

Proceed as follows:

1. Click on the ‘Tank Detail’ option from the tool bar.

2. You can also click on the ‘Tank Details’ option available on the left side in the list. The ‘Tank details’ window will appear.

3. Select a group from the tree view. The selected group will be displayed in the tool bar.

4. Individual tanks can be selected from the drop down combo box in the tool bar or from the ‘Group/Tank’ window.
GAUGE COMMANDS

Modern gauges quite often support special commands and/or functions. These commands can be used for example to ‘Block’ the displacer at a certain level, but also for testing alarm contacts remotely.

Which command and function is exactly available depends on the type of gauge, might also dep
end on the application.

It helps the Operator to know what gauge is installed and whether a particular function is available.

The Gauge Command Task of Entis is ‘Gauge aware’. It shows the user an icon corresponding to the gauge type, and shows which functions are enabled.

Tab layout

1. First select the right group
2. Then select the right tank
3. Then select one of the available command tab’s
4. Click on the desired function
5. And press Apply
How to issue a Dipping Command

Proceed as follows:

1. Click on the ‘Gauge Commands’ tab. The Dipping section will be displayed as default
2. Select a group from the dropdown. The selected group will be displayed in the tool bar
3. Individual tanks can be selected from dropdown.
4. Select the command you want to issue from the check boxes:
   - Density dip  Select to execute a density dip. Only applies to 854 type gauges with density option. Select one of the two radio buttons. Density can be executed in two ways:
     - Downwards
     - Upwards
   - Water dip  Select to execute a water dip
How to issue a Displacer Command

Two different displacer commands can be issued. Proceed as follows:

1. Go to the Displacer’ section of the ‘Gauge Commands’ tab
2. Select a group from the dropdown. The selected group will be displayed in the tool bar
3. Individual tanks can be selected from dropdown.
4. Select the command you want to issue by means of the radio buttons

Table 2: Displacer Commands

<table>
<thead>
<tr>
<th>Radio Button</th>
<th>Command Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test</td>
<td>The level gauge will be set automatic in lock test for approx. 1 minute followed by an unlock command</td>
</tr>
<tr>
<td>Lock Test</td>
<td>When selecting this radio button a data entry field will be enabled</td>
</tr>
<tr>
<td>Lock Test at</td>
<td>Enter the Lock test value</td>
</tr>
<tr>
<td>Auto Unlock</td>
<td>When selecting this check box the displacer will be lowered automatically after reaching the value entered in the data entry field</td>
</tr>
<tr>
<td>Verify Calibration</td>
<td>When selecting this radio button the displacer will be raised until the CA setting in the servo gauge is reached</td>
</tr>
</tbody>
</table>
How to issue a Test Gauge Alarm

**Figure 27: Tank Gauge Alarm**

Proceed as follows:

1. Go to the ‘Test gauge alarm’ section of the ‘Gauge Commands’ tab

2. Select a group from the dropdown. The selected group will be displayed in the tool bar

3. Individual tanks can be selected from dropdown.
   - Alarm tests: Click on one or more alarms you want to test

This command can be used to test the alarm settings in the radar gauge. The alarm settings to be tested are HiHi, Hi, Lo, LoLo in any combination
How to cancel commands

An unlock command is send to the level gauge in order to cancel the command in progress.

Running Dipping

This window shows the progress of a dipping command. The progress indicator is used to show the percentage of completion of the issued command.

The progress of the following dipping commands can be monitored:

- Density dip
- Water dip

Tab layout

At start-up the Tank name, the dipping command and the original displacer position are shown. After start up the actual displacer is followed and displayed

![Displacer](image)

**Figure 28: Displacer**

*Title bar* Displays the selected tank name and the issued command

*Displacer* This group box shows:

*Position* Original The level at start up and the’ displacer position.

Actual The actual position of the displacer
Gauge Commands

Running Displacer
This window shows the actual displacer position during a Lock test or Verify calibration test command. These commands can only be issued in case of a servo level gauge.

Tab layout
At start-up the window shows in the title bar the tank name and the displacer command.

The group box shows the ‘Original’ displacer position (level at start-up) and the ‘Actual’ position. In addition to the level values the status and the dimension are displayed.

Figure 29: Displacer
MANUAL OVERWRITE

This window enables the user to manually overwrite tank data. The 'Manual Overwrite' window can for example be used to overwrite an invalid entity or to enter the value of an entity that is not being scanned or for which automatic measurement has been killed.

This window supports basically three actions:

- Kill an entity (stop the scan)
- Resurrect an entity (start the scan)
- Enter manual data for an entity

Window Layout

The 'Manual Overwrite' window consists of two main parts:

- The entity selection pane (left)
- The entity overwrite area (right)

All Entities

This panel shows a tree with all available entities.

Figure 30: Manual Overwrite
**Entity Pane**

The entity overwrite area consists of four fields.

**Table 3: Entity Fields**

<table>
<thead>
<tr>
<th>Entity Name</th>
<th>This fields shows the selected entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Killed</td>
<td>This check box indicated whether the entity is killed. Marked means killed. This check box is not present by every tank entity.</td>
</tr>
<tr>
<td>Current Value</td>
<td>This column may contain a mix of data entry fields, combo boxes and check boxes depending on the entity being displayed. The entity value will be shown if: - the entity status is set to manual - the entity does not has no status In all other cases the entity value will be blanked</td>
</tr>
<tr>
<td>Dimension</td>
<td>Shows the current dimension</td>
</tr>
</tbody>
</table>

**How to Manual Overwrite**

2. Click on the tree icon at the left site in the tool bar. The ‘Group/Tank’ window will appear.
3. Select a group from the tree view.
4. Select the tank you want to overwrite.
5. Select the entity you want to overwrite from the ‘All Entities’ pane
6. Click on the ‘Killed’ check box of the selected entity in the right pane means killed. The ‘Current value’ field will be enabled.
7. Click on the ‘Current value’ field.
8. Clear the field.
9. Enter the manual value.
10. Click on apply.
Before you begin entering data into the currently selected entity field, the field background will be white. After entering the value the background changes to yellow to indicate that you have made a change and not yet saved it.

If you want to save the entered values click on the Apply button.

The entities Dobs, Tobs and Hydro correction have a close relation. In the entity tree they are put on one line. In the data area they are always shown together (3 lines) but can be edited individually. However Dobs and Tobs must be edited as a pair.

When data of an entity has been changed but not saved (Apply) and another entity or tank is being selected then a popup windows requests the user what is required: either cancel the changed data or apply it.
The GSV calculation type combo box only shows the calculation types that support the Product Reference Temperature that has been configured for the selected tank. The Product Reference Temperature cannot be overwritten manually but must be configured in the CIU 888 with Entis.

The entities GSV Calc type and Product Code have a close relation. When a GSV Calc type is selected that does not support the currently selected Product Code, a pop-up message will advise other valid choices for the Product Code. The other way around, when a Product Code is selected that does not support the currently selected GSV calculation type, a pop-up message will advise other valid choices for the GSV Calculation type. If the advice is ignored, the GSV calculation type will change to “Undefined” after applying the manual overwrite. For diagnostic purpose, a tooltip text on the GSV Calculation type column in the Group Detail task reveals the GSV calculation type code when an “Undefined” combination of GSV Calculation type, Product Code and Product Reference Temperature has been configured.

How to cancel a manual Overwrite

1. Click on the 'Manual Overwrite' icon
2. Click on the tree icon at the left site in the tool bar. The ‘Group/Tank’ window will appear
3. Select a group from the tree view
4. Select the tank you want to cancel a manual overwrite
5. Select the entity from the ‘All Entities’ pane
6. Click on the ‘Killed’ check box of the selected entity in the right pane. Untagged means killed
**PROFILES**

The primary Profiles usage is to create profiles of a selected tank and show a graphical display of the density and/or temperature variation through the product in a tank.

The user has a number of options to make different kind of profiles such as:

**Density profile:**
Used to measure the average density value.

The 854 or 954 level gauge is commanded to start a density measurement.

The density measurement moves the displacer through the product in the tank and determines the density at 10 equidistant points.

**Temperature profile:**
From the average temperature probe all temperature and level values are requested.

**Density and temperature profile:**
Determines a density and temperature profile of all the product in the tank

**Combined profile:**
Measures the water interface and determines a density profile.

**Combined profile (Incl. Temperature)**
Measures the water interface and determines a density and temperature profile.

**Interface Profile**
An Interface profile command starts a density measurement between two specified levels.

The interface profile measurement moves the displacer through the product in the tank and determines the density at 10 equidistant points between the two specified levels.

Note: The user can define whether the density dip is upwards or downwards
Window layout

This window displays the following main sections:

- At the upper part, some real-life tankdata is displayed.
- In the middle part the selection is made for the type of profile to be created.
- At the bottom part for each profile in progress a progress window is displayed.

How to create a profile:

1. Select Profiles | Create Profile; This opens the Create Profile screen.

2. When you want to use a user defined filename, uncheck the checkbox “Automatic Filename Generation”; this gives you the opportunity to enter your own filename in the edit box. Default the checkbox is checked, in that case the filename is: [tankname]_yyyy-mm-ddThh-mm-ss.json

3. Select the required profile type (Density, Combined, Temperature, Interface); For an Interface profile enter the Highest and Lowest level.

4. Select advanced data Upwards or Downwards (only for Density and Interface profile) and “Temperature profile included” (for Density, Combined and Interface)
5. Click on Start; Now the profile command will be sent to the CIU888;

6. When ready, this will be indicated by this window to popup:

![Profile ready](image)

**Figure 33: Profile ready**

**How to view a profile:**

1. Select Profiles | View Profiles; This opens the View Profiles screen

2. Click on Browse Profiles

3. In Filters, select whether you want to see all profiles, or only certain types (Density, Combined, Temperature, Interface)

4. In Filters, adapt the date range when required (default it shows the profiles from the last week)

5. Select in the list of profiles, the profiles you want to be displayed.

6. Click **Open**: Now the selected profiles are displayed.
Example of Profile screens

Temperature Profile

Figure 34: Temperature profile

Density Profile

Figure 35: Density Profile
Interface Profile

Figure 36: Interface Profile

Density + Temperature Profile

Figure 37: Density and Temperature profile
TOTALIZER

The Totalizers offers an easy way to totalize and view the contents of a group of tanks. It totalizes the different parameters of the available tanks in a group such as GOV, GSV, TGSV, Total Mass, TOV and Available GOV.

Windows Layout

![Figure 38: Totalizer](image)

![Figure 39: Totalizer_All](image)
The basic window displays the following information:

- Bar graph indicating the total inventory stored in respect to the total storage capacity within the same group
- Select the type of inventory you want to totalize. The combo box can be used to select another volume or mass entity. This can be either GOV, GSV, TGSV, Total Mass, TOV or AvailableTOV.
- Shows the number of tanks excluded from the totalization.

**How to select the Group Totalizer**

Proceed as follows:

1. Click on the ‘Group Totalizer’ icon. This window will be displayed.

   ![Figure 40: Totalizer Icon](image)

2. Click on the tree icon at the left site in the tool bar. The ‘Group/Tank’ window will appear.

3. Select a *group* from the tree view. The selected group will be displayed in the tool bar.

4. Other groups can be selected from the combo box in the tool bar or from the ‘Group/Tank’ window.
WHAT IF..

What if .. is a predictor tool which calculates and tells us values of other parameters based on the custom input values of points.

A calculator that allows you not only to calculate inventory but one that goes much farther.

1. Connect to Entis station then click on What If icon from menu toolbar.

Figure 41: What If ..
What If ..

Tab layout

2. On What-If screen, choose desired group then respective tank from drop down for which user wants to calculate data.

- The page contains three tabbed pages, with resp. Start, delta and Stop data.
- The name of the selected Tank
- The name of the stored Product
- All measured and inventory data
- A bitmap of the Tank
- Ambient temperature and used CTSh factor
- Flow and calculated time to fill/empty
- Entry fields for density sample data
- Calculated reference density
- Calculated Total mass

Figure 42: What – If layout
How to use the calculator

Start the Tank Calculator from the toolbar of the Entis

First select a Group/Tank and hit the button

The Tank Calculator always starts up with the actual inventory data at that moment

The Start screen will pop up

All white fields are data entry fields and their contents can be modified

Figure 43: What – If Start

System will calculate other values and display.
To restore values to real time values coming from CIU, user should click on Reload Data.

Figure 44: What – If Reload
REPORTS

The Reports tab makes it possible to print out reports in pre-defined templates. One can preview and print Tank Detail and Group Detail reports under this tab. The tank data displayed in the reports consists of the last available measured and inventory data received from the gauge.

Window layout

![Figure 45: Reports](image)

Report Printing

The Report printing window consists of four main parts:

- The Browse Reports
- The required type of report
- The tank/group combo boxes
- The template combo box
Report Printing

Type of Reports

Select one of the report types from the combo box. Based on the report type select group and then the available tank/templates.

The following Options are enabled depending of the selected report:

- **Group/Tank**: Two combo boxes used to select a group or a tank name
- **Template**: Depending on the selected type of report the ‘Template’ combo box will list the relevant available templates

How to select Reporting

1. Click on the ‘Reporting’ icon.

   ![Figure 46: Reporting icon](image1)

2. You can also select ‘Reports’ from the options available on left side of the screen.
3. Select Tank Details or Group Details from the combo box.
4. Select a Template.
5. Click on Preview.

![Figure 47: Tank detail report](image2)
Report Printing

Command buttons

[Print] Prints the selected report

[Preview] Shows a preview of the selected report type on screen

This option will be displayed on the top of the 'Reports' screen. All the saved pdf files located in another directory can be selected for viewing again.

A combo box is available to select the report type which will list only the reports belonging to that report type. The calendar option as shown below allows to select the date range to view the reports belonging to that date range.
The format of a printout is defined by means of templates. Templates are made using a library called PdfSharp. The templates are predefined and Entis supports following templates:

- Tank Detail
- Group Detail – Crudes, CTL, General Product, Inventory, Measured
- What If
- Delta Column
Report Templates

Example of a group detail printout.

Figure 49: Group detail report
Report Printing

Tank Details

Example of a tank detail printout.

Inventory

<table>
<thead>
<tr>
<th>Product Level</th>
<th>TOV</th>
<th>Diesel</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.4970</td>
<td>17497.000</td>
<td></td>
</tr>
</tbody>
</table>

Water Level

<table>
<thead>
<tr>
<th>Water Volume</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>528.000</td>
<td>m³</td>
<td></td>
</tr>
</tbody>
</table>

GOV

<table>
<thead>
<tr>
<th>GOV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16972.000</td>
<td>m³</td>
</tr>
</tbody>
</table>

Obs. density

<table>
<thead>
<tr>
<th>Obs. density</th>
<th>Product Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7450</td>
<td>25.43 °C</td>
</tr>
</tbody>
</table>

Ref. density

<table>
<thead>
<tr>
<th>Ref. density</th>
<th>CTL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.88817</td>
<td></td>
</tr>
</tbody>
</table>

GSV

<table>
<thead>
<tr>
<th>GSV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16771.221</td>
<td>m³</td>
</tr>
</tbody>
</table>

Available Room

<table>
<thead>
<tr>
<th>Available Room</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2763.000</td>
<td>m³</td>
</tr>
</tbody>
</table>

Available GOV

<table>
<thead>
<tr>
<th>Available GOV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>100.000</td>
<td>m³</td>
</tr>
</tbody>
</table>

Low TOV

<table>
<thead>
<tr>
<th>Low TOV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>100.000</td>
<td>m³</td>
</tr>
</tbody>
</table>

High TOV

<table>
<thead>
<tr>
<th>High TOV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20000.000</td>
<td>m³</td>
</tr>
</tbody>
</table>

Closed Temp.

<table>
<thead>
<tr>
<th>Closed Temp.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25.43 °C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Air Density

<table>
<thead>
<tr>
<th>Air Density</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.228</td>
<td>kg/m³</td>
</tr>
</tbody>
</table>

 Corrections

<table>
<thead>
<tr>
<th>S&amp;W</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NSV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16771.221</td>
<td>m³</td>
</tr>
</tbody>
</table>

Mass (in vacuum)

<table>
<thead>
<tr>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12540.469</td>
<td>kg</td>
</tr>
</tbody>
</table>

Into Tank

<table>
<thead>
<tr>
<th>Time to Fill / Empty:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>00:04:49</td>
<td></td>
</tr>
</tbody>
</table>

Weights and Measures Key

- **N**: Data is not valid
- **E**: Data is in error
- **D**: Data is revised
- **A**: Data is approved
- **S**: Data is not available
- **R**: Data is reviewed
- **M**: Data is manual

Not W&M Approved Printout

<table>
<thead>
<tr>
<th>GSV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16771.221</td>
<td>m³</td>
</tr>
</tbody>
</table>

VE is valid

<table>
<thead>
<tr>
<th>Time stamp: 30-Aug-2019 10:40 AM (UTC+05:30)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Report name: TankDetail-Rev 1.0.7002.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Report Printing

Delta Column

Figure 50: Delta column Report
### Report Printing

#### What If

Example of a What If printout.

<table>
<thead>
<tr>
<th>Honeywell</th>
<th>What If</th>
<th>Print Date: 30-Aug-2016 11:46 AM UTC (CDT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product: PetroMAB</td>
<td></td>
<td>Page 1 of 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tank</th>
<th>Start Tank</th>
<th>Delta Tank</th>
<th>Stop Tank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank1</td>
<td>13,460.00</td>
<td>0.0000</td>
<td>13,460.00</td>
</tr>
<tr>
<td>TOV</td>
<td>13,460.00</td>
<td>0.0000</td>
<td>13,460.00</td>
</tr>
<tr>
<td>Water Level</td>
<td>0.0005</td>
<td>0.0000</td>
<td>0.0005</td>
</tr>
<tr>
<td>Water Volume</td>
<td>0.5000</td>
<td>0.0000</td>
<td>0.5000</td>
</tr>
<tr>
<td>T amb</td>
<td>°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CTSn</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSV</td>
<td>13,465.500</td>
<td>0.0000</td>
<td>13,465.500</td>
</tr>
<tr>
<td>Obs. Density</td>
<td>745.50</td>
<td>745.50</td>
<td>kg/m³</td>
</tr>
<tr>
<td>Obs. Temperature</td>
<td>30.47</td>
<td>30.47</td>
<td>°C</td>
</tr>
<tr>
<td>Hydrometer Corr.</td>
<td>On</td>
<td>On</td>
<td></td>
</tr>
<tr>
<td>Product Temp.</td>
<td>30.47</td>
<td>30.47</td>
<td>°C</td>
</tr>
<tr>
<td>Ref. Density</td>
<td>758.70</td>
<td>758.70</td>
<td>kg/m³</td>
</tr>
<tr>
<td>CTL</td>
<td>0.90234</td>
<td>0.90234</td>
<td></td>
</tr>
<tr>
<td>Available Room</td>
<td>6,534.00</td>
<td>6,534.00</td>
<td>m³</td>
</tr>
<tr>
<td>Available GSV</td>
<td>13,388.00</td>
<td>13,388.00</td>
<td>m³</td>
</tr>
<tr>
<td>GSV</td>
<td>12,227.899</td>
<td>0.0000</td>
<td>12,227.899</td>
</tr>
<tr>
<td>SAV</td>
<td>0.00</td>
<td>0.00</td>
<td>%</td>
</tr>
<tr>
<td>NSV</td>
<td>0.0000</td>
<td></td>
<td>m³</td>
</tr>
<tr>
<td>Vapour Temp.</td>
<td>12.86</td>
<td>12.86</td>
<td>°C</td>
</tr>
<tr>
<td>Vapour Press.</td>
<td></td>
<td></td>
<td>kPa</td>
</tr>
<tr>
<td>Liquid Mass</td>
<td>100,385,360</td>
<td>100,385,360</td>
<td>kg</td>
</tr>
<tr>
<td>Vapour Mass</td>
<td></td>
<td></td>
<td>kg</td>
</tr>
<tr>
<td>Total Mass</td>
<td></td>
<td></td>
<td>kg</td>
</tr>
</tbody>
</table>

Report name: What If 1.0.0012.0
<table>
<thead>
<tr>
<th></th>
<th>Start Tank</th>
<th>Stop Tank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Temperature</td>
<td>15.55</td>
<td>15.55</td>
</tr>
<tr>
<td>VCM</td>
<td></td>
<td>ASTM D1250-80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASTM D1250-80</td>
</tr>
<tr>
<td></td>
<td>72524</td>
<td>72524</td>
</tr>
<tr>
<td>VCM Product Code</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Flare Checking</td>
<td>On</td>
<td>On</td>
</tr>
<tr>
<td>Thermal expansion</td>
<td>11883.000</td>
<td>11883.000</td>
</tr>
<tr>
<td>Correction Factor</td>
<td>CTL 0.96234</td>
<td>CTL 0.96234</td>
</tr>
<tr>
<td>Volume Corr. Type</td>
<td>Vapour Correction</td>
<td>Vapour Correction</td>
</tr>
<tr>
<td>Vapour Correction</td>
<td>Acc. Liquid to</td>
<td>Acc. Liquid to</td>
</tr>
<tr>
<td></td>
<td>Volume Ratio</td>
<td>Volume Ratio</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Mass Calculation</td>
<td>in vacuum</td>
<td>in vacuum</td>
</tr>
<tr>
<td>Air Density</td>
<td>1.225</td>
<td>1.225</td>
</tr>
<tr>
<td>Insulation ratio</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>
HELP

This window selection opens the ‘Entis User Guide’ for user reference.

Window layout

![Figure 51: Help](image)

How to select Help

1. Click on the ‘Help’ icon available in the toolbar.

![Figure 52: Help icon](image)

2. You can also select ‘Help’ from the options available on left side of the screen.

3. On click of either of the 2 options, the ‘Entis User Guide’ opens on the right panel of the Entis screen.
AGE ALARMS

The system periodically checks the tanks records time stamp against the system clock. If the difference exceeds a predefined value, the data are out-of-age and an AGE alarm is generated. Age is checked on a per tank basis, AAL’s are generated for each tank separately.

![Alarm Settings](image)

**Figure 53: Alarm Settings**

**Foreground**
- Foreground age alarm is generated

**Background**
- Background age alarm is generated
PRODUCT COLOR CODE

Each product will have a color which can be customized.

![Configure Product Color Code](image)

Figure 54: Product Color Code

LANGUAGE

User can choose either English or Dutch language.

![Language Option](image)

Figure 55: Language
CLOCK SYNC

The master clock feature synchronizes the ENTIS application and CIU clocks, with the ENTIS clock serving as the master.

Having the ENTIS and the CIU clocks be synchronized helps ensure that timestamps on alarms, events and operational data are consistent.

![Clock Synchronization](image)

**Figure 56: Clock Sync**

Settings – File Cleanup Configuration

The files can be cleaned up/deleted after a defined number of days in the below configuration. The Disable/Enable auto cleanup can be applied for auto cleanup of files.

![File Cleanup Configuration](image)
HOST STANDBY & REDUNDANCY SUPPORT (CIU 888)

The Entis system can be enhanced for use in critical applications with hot standby and redundancy support. Redundancy support can even cover the unlikely event of a network failure, providing sustained and reliable data to your management system. After the occurrence of an error the second system will automatically start and take over the lost functionality. During the automatic start, all gauge data will be rescanned and recalculated to ensure the reliability of data.

Operator can also perform the switch over manually based on the health status of the CIU888

Windows Layout
How to Perform Manual Switch Over

Proceed as follows:

1. Click on the ‘Settings tab. ‘CIU Status’ tab will be appeared

2. Click on ‘CIU Status’ tool bar. The ‘CIU Status’ window will appear

3. CIU Status window will show the status of the CIU888 with the following fields:
   - CIU Name  Name of the CIU 888
   - Type  Primary/Secondary
   - Health  Green if CIU is up and healthy, Red if CIU is own/network failure
   - Status  Active/Passive

4. Select Hot stand by pair CIU. ‘Switch Over’ button will be enabled.

5. Click on ‘Switch Over’ button. On click of Switch Over button Passive member will become Active and Active member will become Passive.
ALARMS

CONFIGURE ALARMS

Alarms are primarily used to notify operators of conditions that might call for intervention or supervisory control. Alarms for standard points are specified when you configure your points in Quick Builder. The standard points of tanks for which alarms can be configured are given in the table below.

Table 4: Configuration Alarms

<table>
<thead>
<tr>
<th>Point</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>_CDObs</td>
<td>The Product Density</td>
</tr>
<tr>
<td>_cProductLevel</td>
<td>The Product Level in the tank.</td>
</tr>
<tr>
<td>_cProductTemp</td>
<td>The Product Temperature</td>
</tr>
<tr>
<td>_cVapRoomPress</td>
<td>The product vapor pressure</td>
</tr>
<tr>
<td>_cVapRoomTemp</td>
<td>The product vapor temperature</td>
</tr>
<tr>
<td>_cWaterLevel</td>
<td>The Water Level in the tank</td>
</tr>
<tr>
<td>_cWaterVol</td>
<td>The Water Volume</td>
</tr>
<tr>
<td>_cProductDRef</td>
<td>The reference density for the Product in the tank.</td>
</tr>
<tr>
<td>_FlowTOV</td>
<td>The Total Observed Volume(TOV) of the product per time unit.</td>
</tr>
<tr>
<td>_GOV</td>
<td>The Gross Observed Volume(GOV). The GOV is the total volume of all petroleum liquids and sediment and water, excluding free water, at observed temperature and pressure</td>
</tr>
<tr>
<td>_GSV</td>
<td>The Gross Standard Volume(GSV). The GSV is the total volume of all petroleum liquids and sediment and water, excluding free water, corrected by the appropriate volume correction factor (VCF = CTL) for the observed temperature and API gravity, relative density, or density to a standard temperature, and also corrected by the applicable pressure correction factor (Cpl) and meter factor.</td>
</tr>
<tr>
<td>_MassLiq</td>
<td>The product volume weight.</td>
</tr>
<tr>
<td>_TGSV</td>
<td>The Total Gross Standard Volume(TGSV).</td>
</tr>
<tr>
<td>_TotalMass</td>
<td>The product plus vapor volume weight.</td>
</tr>
<tr>
<td>_TOV</td>
<td>The Total Observed Volume(TOV)</td>
</tr>
<tr>
<td>_GAL</td>
<td>Gauge Alarm</td>
</tr>
<tr>
<td>_AALB</td>
<td>Age Alarm Background</td>
</tr>
<tr>
<td>_AALF</td>
<td>Age Alarm Fore ground</td>
</tr>
<tr>
<td>_MovingStatus</td>
<td>The level moving Status</td>
</tr>
<tr>
<td>_TCAL</td>
<td>Tank CRC Alarm</td>
</tr>
</tbody>
</table>
Window Layout

How to configure Alarms

To configure an alarm for a point of a tank, please follow the steps given below.

1. Type the point name prefixed with the tank name in the Command text box on top right corner of the station. For example, if an alarm must be configured for the _cProductLevel for tank T811, the tank name should be prefixed with the tank name as shown below.

2. Press F12. This opens the point configuration screen as shown below.
3. Click on Alarms Tab. Alarms configuration screen opens. Fill in the details of the alarm for the selected point of the tank.

For more details on how to configure alarms and understand the parameters such as Type, Limit, On Delay etc. please refer the About alarms and events for standard points section in Experion Server and Client configuration guide, EHDOC-X127-en-510A.
VIEW ALARMS

Alarms view in station provides details about each alarm such as the Date and time when it has occurred, the asset location, source, condition, priority etc.

Window Layout

[Image of the Honeywell system interface with a menu open to the Alarms option.]
How to view Alarms

To view the Alarms page in Experion station, go to the View menu and click on the Alarms item. Alternatively, it can be accessed by clicking the Alarms icon on the tool bar or the Display Alarm Summary icon flashing in Red on the status bar.

Understanding Alarms view.

This screen has the following columns.

1. **Priority of the Alarm with a visual icon.**
   This column shows the alarm’s state in symbolic way with a Yellow triangle or Red square with an asterisk in it. This represents the priority of the alarm, whether it is a critical, a high, a medium or a low alarm.

2. **Date & Time**
   Date and Time when the alarm was raised.

3. **Location Tag**
   Location of the Alarm. For Entis, it is generally EntisAsset. Alarms can be filtered based on location. This location filter is available above Date & Time column.

4. **Source**
   The point or device that caused the alarm. If the point ID is too long to be fully displayed in the alarm summary, it is truncated. To see the full name, place the mouse pointer over the partial point ID to display the full point ID.

5. **Condition**
   The alarm condition.
6. **Priority**
   The priority of the alarm as listed below. The prefix letter indicates the general priority as listed below.
   - Critical
   - Urgent
   - High
   - Low
   If a number follows the letter, it represents the relative priority within the general priority. For example, Urgent alarms can vary from U15 (most urgent) to U00 (least urgent).

7. **Description**
   A description of the alarm. If the description is too long to be fully displayed in the alarm summary, it is truncated. To see the full description place the mouse pointer over the partial description to display the full description.

8. **Trip value**
   The value that triggered the alarm.

9. **Live value**
   The current value. This value is continually updated. If the Format live value in Alarm Summary using PV Format setting in the Summary Displays tab of Server Wide Settings is enabled, live values in the Alarm Summary will be shown in the format configured for point parameter values. For information, see “Configuring precision values for point parameters.” Alternatively, two decimal places will be shown.

10. **Units**
    The unit that the value represents, for example ml/s. Please refer Operators guide available in Help menu or Server and Client configuration guide in Experion HS in Start Menu for more details on viewing the Alarms and understanding them in detail.
VIEWING EVENTS

Every event, such as a point status change or an operator action, is stored in an event database. The event database stores events for a specified period. Using Event archiving, you can archive these events to a network file server or to a disk where they can be stored for future retrieval and reporting. For information on archiving events or restoring events from archive, see the Experion Operator's Guide, EHDOC-XX80-en-510A.

Windows layout
How to view events

To view the events summary in Experion station, navigate to View -> Events -> Event Summary menu option on Experion Station as shown in the picture below.

Understanding Events view

The Events summary is shown in tabular format with the following columns.

1. **Date & Time**
   The time and date at which the event was received.

2. **Location**
   The tag name of the asset to which the point or device belongs.

3. **Source**
   The point or device that caused the event. If the point ID is too long to be fully displayed in the event summary, it is truncated. To see the full name, place the mouse pointer over the partial point ID to display the full point ID.

4. **Condition**
   The event condition.

5. **Action**
   The action, either operator or system generated.
6. **Priority**
   The priority of the event. The prefix letter indicates the general priority:
   - Urgent
   - High
   - Low
   - Journal

   If a number follows the letter, it represents the relative priority within the general priority. For example, Urgent events can vary from U15 (most urgent) to U00 (least urgent).

7. **Description**
   A description of the event.

   If the description is too long to be fully displayed in the event summary, it is truncated. To see the full description, place the mouse pointer over the partial description to display the full description.

8. **Value**
   The value of the event.

9. **Units**
   The unit that the value represents, for example ml/s.

10. **Operator**
    The logged in Operator.

Please refer Operators guide available in Help menu or Server and Client configuration guide in Experion HS Pdf collection in Start Menu for more details on viewing the Events and understanding them in detail.
HISTORICAL AND REALTIME TRENDING

Using Experion trends feature user can view the historical or real time value trends of points. A trend display shows changes in point parameter values over time. Typical uses of trend displays are to show changes in room temperature or power consumption over the day.

A trend display shows changes in point parameter values over time. Typical uses of trend displays are to show changes in room temperature or power consumption over the day.

Trends can display data in several ways, including:

- Line graphs (the default)
- Bar graphs
- Numerical list of historical data
- X-Y plot of the value of one point against another (that is, one point on the x-axis and the other on the y-axis).

Each trend is identified by a number, and generally has a descriptive title.

How to create/view Trends

1. Open Experion and connect to Entis station.
2. Click on View then go to Trends.

3. Make sure user has MNGR or ENGR security level logged in Experion.

4. Click on Configure Trends.
5. Click on 1st item.

Figure 60: Click on Trend

6. Fill in the custom details, click on options in front of whichever color scheme user wants to assign to trend in Point Id column, it will open Point Browser window, user can choose desired point from here.

Figure 61: Select the point
7. Choose the parameter to be displayed in trend from the dropdown. Then click on view trend

![Select the parameter](image1.png)

**Figure 62: Select the parameter**

8. **Historical and Realtime Trending**

9. View the current value of point's parameter in Current value column and trend will be available on the graph screen.

![View Trend](image2.png)

**Figure 63: View Trend**
Historical and Realtime Trending

**View historical trends**

User can view historical trend by changing date and time, it will display historical trend if trend was created and was running at that time.

To change the period on the trend you are viewing

1. In the Period box, select the period you want to see on your trend.
2. Click the Time selector and choose the required position of the selector.
3. In the Date box, type or select the required date.
4. In the Time box, type the required time and press ENTER.

![Figure 64: Historical Trend](image)
For more information
To learn more about ENTIS, visit www.honeywellprocess.com
Or contact your Honeywell Account Manager

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