P2 Verify 4.1
User's Guide

Contents

Preface

This guide provides users with information on how to use P2 Verify.

This guide outlines how to use P2 Verify to collect, enter, and validate operational data collected on site.

Who Should Read This Guide

This guide is intended for operations personnel involved in the day to day tasks of recording and validating data collected on-site. Typical users of P2 Verify include Operator Technicians, Production Shift Supervisors, Operations Superintendents, and Operations Managers.

This guide assumes working knowledge of:

- Microsoft® Internet Explorer®
- Microsoft® Windows® operating systems

Related Documentation

Documents in the P2 Verify technical documentation suite are:

Title	Description
P2 Verify Release Notes	Release Notes for the latest version of P2 Verify.
P2 Verify Installation Guide	Installing P2 Verify components and configuring P2 Verify for first time use.
P2 Verify Administrator's Guide	How to administer data area layouts in P2 Verify.
P2 Verify User's Guide	How to use P2 Verify to collect, enter, and validate operational data and submit it to the production reporting system.

These documents are available from P2 Customer Support.

Support

P2 Customer Support provides a central point of contact for software assistance and the resolution of software issues. As part of this, P2 offers a variety of professional services, online resources, and access to experienced product specialists who are able to assist with your service requests. For support and information regarding our products, the following resources are provided:

ONLINE SUPPORT PORTAL

The P2 Support Portal (http://p2energysolutions.com/support) provides access to online support, where you can raise service requests for P2 software, track defects, get product information, and communicate with P2 Customer Support.

CUSTOMER COMMUNITIES

P2's customer communities offer a networking environment for you and other P2 users. Our boards and user groups offer an informal setting to exchange information and discuss issues relevant to today's oil and gas companies. P2 is confident that together, we can create an interactive venue that will provide value by allowing our customers to communicate, collaborate and connect at multiple levels. For details, see www.p2energysolutions.com/services/customer-communities.

TRAINING

P2 offers a variety of standard and customised training courses (ranging from introductory courses through to administrator courses) to help you learn how to use P2 products.

CONTACT DETAILS

You can contact P2 Customer Support via phone or the Support Portal for technical support on any aspect of P2's products. Please also contact P2 Customer Support for further information on the Customer Communities, access to the online support portal, and information on available training courses. If you do not have a user account for the Support Portal, contact your internal support team or call the number below.

Phone:	1300 739 969 (Australia only) or +61 8 9241 0314 (outside Australia)
	USA: 1-844-REACHP2 (1-844-732-2472)
Support Portal:	http://support.p2energysolutions.com

Introduction

Production reporting is vital to the daily operation of any company. Ensuring the data on the production reports is timely and accurate is crucial to this process. At times this data can be dispersed, both in location and the form the data is in (such as log books, lab data, and distributed control systems).

P2 Verify is a web-based interface, where users can be given security privileges to access the collected data. This speeds up the data validation on what may have been a manual process.
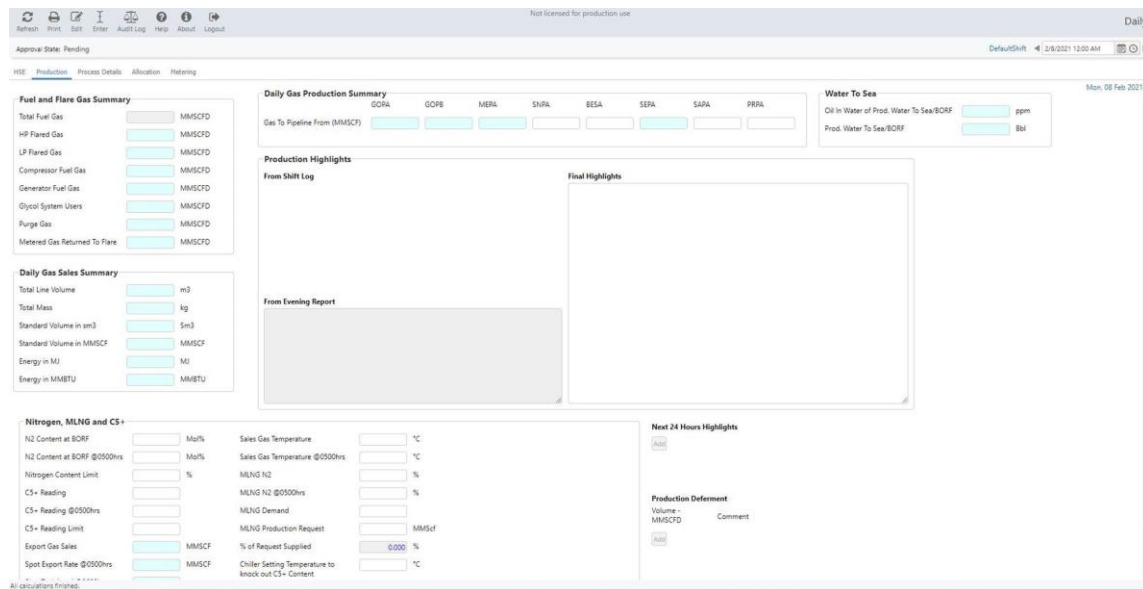
By combining what was typically dispersed data into one interface, P2 Verify can provide a more accurate context for the data. With this knowledge, the data can be more quickly validated and made available to production reporting environments than with manual methods.

System Overview

P2 Verify provides a secure, web-based interface for the collection and manual entry of data. This allows for easy aggregation of data from multiple operational data sources. The applied security also ensures that specific users are responsible for certain data.

Too often, production data is collected automatically and sent to the production allocation and reporting system without validation by the operators, the people who really understand the data. P2 Verify highlights a process reading when it's outside its normal range, and prompts the operator to either correct or accept the value. This simple validation process saves hours of work in the head office. For example, correction of a bad gas flow by the operator will save hours of searching in the head office when the month's end gas balance will not reconcile.

PTSA - HSE	PTSA - Production	PTSA - Well Status	PTSA - Process Details	WPPA - HSE	WPPA - Production	WPPA - Well Status	WPPA - Process Details	WPPB - HSE	WPPB - Production	WPPB - Well Status	WPPB - Process

WPFA - Highlights

Oil Wells

	Hours Online	Choke	BS&W	FTHP	FLP	FLT	DHP	DHT	Gas Lift Rate	Casing Pressure A	Casing Pressure B	SCSSV Date	
WPPA-01	21	325	21	36	16				56.00			08-Feb-2(	x
WPPA-02	2	0	23	32	18				96.32			08-Feb-2(	x
WPPA-03	24	315	75	33	14				88.21			08-Feb-2(	x
WPPA-04	2	0	86	31	12				74.21			08-Feb-2(	x
WPPA-05	3	0	93	34	15				32.63			08-Feb-2(	x
WPPA-07S2	2	0	19	35	21				72.89			08-Feb-2(	x
WPPA-08S1	1	0	29	36	19				98.36			08-Feb-2(	x
WPPA-09S1	8	0	83	24					25.39				x
WPPA-10S1	3	0	48	21					37.41				x
WPPA-11	4	0	73	23					39.42				x
WPPA-13	1	0	51	29					18.65				x
WPPA-14	5	0	20	26					38.20				x
WPPA-15	6	0	38	25					91.54				x
	82								769.23				

Data collected from the production facility or plant is used for critical business tasks such as production allocation and equipment performance monitoring. P2 Verify collects data from existing systems, such as process historians, as well as allowing users to enter data that is not collected automatically. This data is then validated before it is released for other users and systems.

P2 Verify is an application that collects data from a variety of production facilities, plants, control systems, laboratory and manual sources, and consolidates it in an industrial-strength database before presenting it to operations personnel for validation.

P2 Verify, along with P2 Server, is a production accounting solution aimed at managing the production data and reporting.

Operations reports are produced on a daily basis. Approved data is stored in a database and then displayed to operators via P2 Explorer, or another production reporting application, such as P2 PDMS Reporting.

Benefits

P2 Verify provides an easy way to manage data validation tasks. It provides the following benefits:

DATA INTEGRITY

- Data is validated at source as well as at different operational levels, ensuring that all report data is accurate and meaningful, saving you from reissuing reports to customers or government.

- Data is automatically collected and displayed for the user. The use of colour coding helps in the validation process by highlighting values that lie outside predefined limits.

- Fields can be defined as required. If a required field has been left empty then that field will not pass validation.

- Each numeric field on the P2 Verify interface is assigned an upper and lower limit. If the number in that field is outside that range, the field's text will be highlighted in a predefined colour according to the type of error.

- Many of the fields will only accept a certain type of data to be entered. For example, if the field expects a number then normal alphabetic text (such as "ABC") will not pass the validation process. The text in that field will be highlighted, alerting the user that there is a problem with the data entered.

- Fully auditable trace on all collected and manually entered data so you know who entered and approved which data.

VALUABLE BUSINESS AND ASSET PLANNING TOOL

- Provides only validated data for business and asset planning, so you can be sure that all the information required for your business modelling is accurate and up to date.

- Monitor imbalance and peaking of production systems.

- Export data to P2 Explorer, to investigate trends in both current and historical production data.

- Export data to P2 Server, to run allocation calculations.

- Export data to P2 PDMS Reporting, to generate regulatory reports and production data summaries.

EASY TO USE

- No need for unwieldy spreadsheets or complex database programs. Personnel who need to access operational data don't have to learn foreign concepts in order to use the data.

- Data is presented in easy-to-understand tabular and graphical formats, accessed through a standard Internet Web browser.

FLEXIBLE INTERFACE

- Do your work your way. No need to change the way you work – you can customise the layout of the interface to suit your requirements and preferences.

- Provides a web-based data capture tool that allows data entry and access anywhere, anytime.

Features

- Automated data collection, with the facility to enter manual data if required, such as downtime codes and manual samples.

- Configurable collection times and data sources.

- Facility to validate the collected data on-site before it is transmitted to the head office or to a production reporting system.

- Powerful conditional validation rules, with configurable indicators as to when the validation rules are applied.

- Facility for operators to correct erroneous data.

- The sign-off workflow between operator, supervisors, and plant or facility managers, via a user-defined approval process.

- A running log of what has happened during the production period.

- A visual designer to configure the layout of user interface controls for data editing.

- Versioned layouts that change with your working environment.

Concepts

P2 Verify is an application that displays a web page containing tabs of related production information. The operator interface allows on-site operational users to review, modify, and approve daily information before it is released to users off-site.

Data is at the heart of P2 Verify. Data is collected, validated (so that data integrity is maintained), and then distributed for reporting purposes. It is important to understand the concepts related to the data organisation, manipulation and presentation in P2 Verify.

Operational Workflow

P2 Verify is designed to be placed between your live data historians and your production reporting environments. Typically, a P2 Verify installation will collect a combination of manual, historian, and laboratory data for a production period (shift, day, week, month, quarter or year). After the data is collected, the operators commence a validation process for a production period's data.
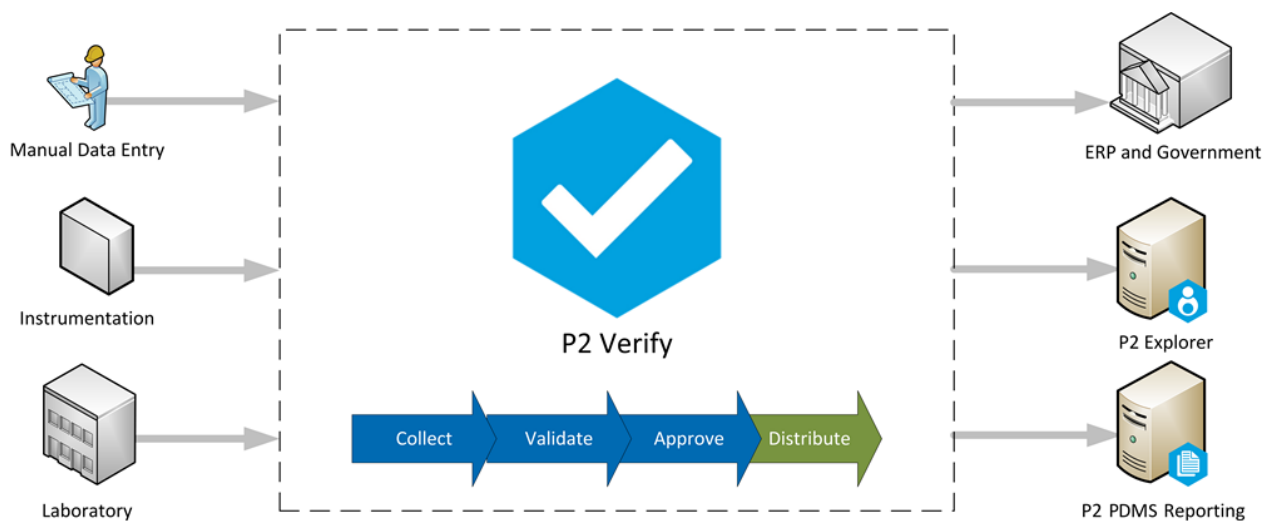
At the end of the process, the data is approved and distributed to production reporting environments.

P2 Verify is a web-based interface, where users can be given security privileges to access the collected data. This speeds up the data validation on what may have been a manual process. By combining what was typically dispersed data into one interface, P2 Verify can provide a more accurate context for the data. With this knowledge, the data can be more quickly validated and made available to production reporting environments than with manual methods.

Control Systems

P2 Verify has been designed to fetch data from the field, at the field, and provide for validation of that data by the people who work in the field. This gives the system the best chance of getting the most important information quickly and reliably.

Most of the data is retrieved from the historian databases, which collect data from the control systems that are used to run the plant or facility. These are configured during the installation of P2

Verify and are given unique tag names to identify them. Data can also be collected from other data sources.

The structure of the system is illustrated in the following diagram.
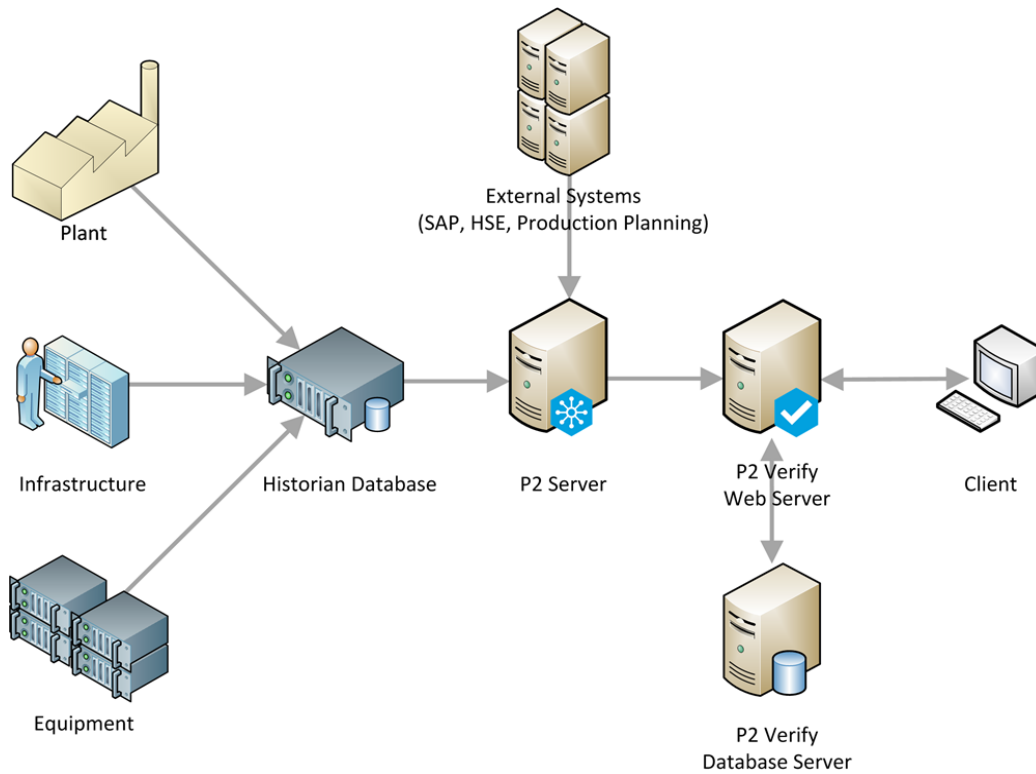
The remaining data is entered manually in the field by the operators.

Data Collection

Values from control systems are collected every minute of the day and stored in the historian databases as real time data. To limit the amount of manual entry the operators have to do, P2 Verify automatically collects as many values as possible from the historians, and puts them into the P2 Verify database.

At the end of the reporting period, a scheduled task fetches the current values from the historian and stores them in the P2 Verify database. From here, P2 Verify picks up and modifies the values.

To prevent data from being overwritten, values collected automatically at the end of the report period are marked as **read-only** until the collection has finished. All other values can be entered before the collection is completed.

If an operator uses P2 Verify before the automatic collection takes place, the only fields available for editing will be manual entry fields. This allows the operators to enter data into manual entry fields before the collection and save them to the system. After collection has finished, they can then check the collected values before submitting the data for validation.

Offsets for what time the collection occurs can be configured in the Area Editor by the System Administrator.

Should there be any error or discrepancy in the data collected by the automatic collection, the operator has options to manually recollect non-manual entry field data: to recollect all data in the report, recollect all data in a particular tab, or selectively recollect an individual field.

> **Note:** If P2 Verify is opened before collection takes place, it will need to be refreshed to pick up the new values from the historians.

Data States

Actions performed on collected and entered data affects the state of the data. Although data states and state names can be configured to suit your requirements, data is typically in one of five states:
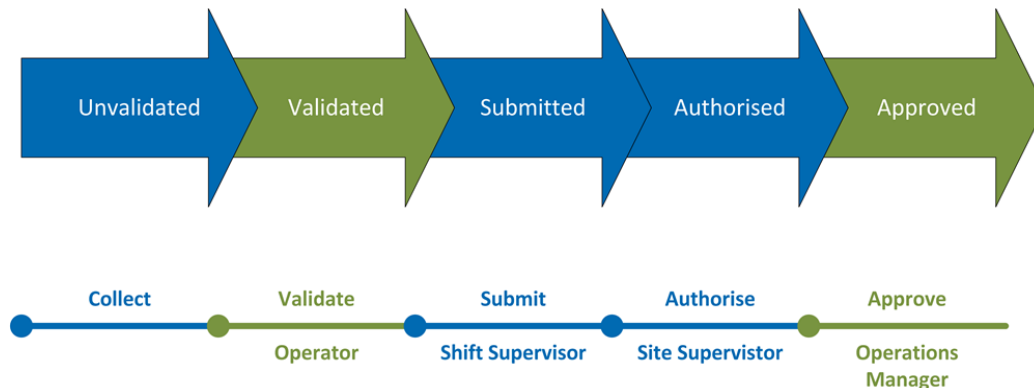
Unvalidated

Data that has been sourced from the historians and has not been checked by anyone. For example, an Operator may validate this unvalidated data. After this occurs, the data is in a validated state.

Validated

Data that has been checked and modified, commented, and manual data items added. For example, a Shift Supervisor may submit data that was validated by the Operator. After this occurs, the data is in a submitted state.

Submitted

Data that has been further checked, commented, modified, and manual data entered. For example, a Site Supervisor may authorise data that was submitted by the Shift Supervisor. After this occurs, the data is in an authorised state.

Authorised

Data that has been further checked, commented, modified, and manual data entered. For example, an Operations Manager may approve data that was authorised by the Site Supervisor. After this occurs, the data is in an approved state.

Approved

Data that has been further checked, commented, modified, and manual data entered. This data is deemed fit for release to the destination data repository by the Operations Manager.

Data Validation

The primary function of P2 Verify is to validate data to make sure it is accurate and meaningful. P2 Verify performs three levels of validation on all data:

Data type validation

Many of the fields will only accept a certain type of data to be entered. For example, if the field expects a number, normal alphabetic text (such as "ABC") will not pass the validation process. The text in that field will change to a predefined colour, alerting the operator that there is a problem with the data entered.

Required field validation

Fields can be defined to be required. If a required field has been left empty, that field will not pass validation. Required fields appear on your screen in the default background colour of light blue.

Limit validation

Each numeric entity on a P2 Verify page is assigned an upper and a lower limit. If the number in that entity is outside that range, the entity's text will change to the predefined colour for this type of error (red, by default).

Note: Validation is not performed on read-only fields.

Limits and Acceptable Values

Most fields in P2 Verify have a range of acceptable values.

For example, when reporting on production downtime, you would expect the offline hours to be indicated by a number between 0 and 24 (hours).

To help ensure quality of data, constraints are put on the entities. When values that are outside the valid ranges are entered in the associated controls, the text appears in a different colour and P2 Verify will not save the report until these values are either corrected or accepted.

The limits placed on entities can be either a **hard limit** or a **soft limit**. Each limit is represented by a pair of lower and upper values, where a **lower limit** represents the lowest value that passes the validation, while an **upper limit** represents the highest value of an entity that passes the validation.

Hard limit

The value of the cell cannot exceed the upper or lower limit. For example, the *Hours Offline* for production downtime must be between 0 and 24 (hours) and anything outside of that is invalid and will not be accepted.

Note: For **VFYTextBoxes** and **VFYCommentBoxes**, if the data type is set to string, the hard high limit will become a **Max Chars** attribute and all other limits fields will be greyed out. This attribute represents the maximum length of the text box allowed in input mode. You will not be able to submit a report if this field does not pass validation.

Soft limit

The value in the cell should be within the upper or lower limit, but you can enter a value outside of the limits. A soft limit will usually be applied when a value is expected to be in a certain range for 99% of the time but can go outside of the expected range in certain circumstances.

An individual entity can have both hard and soft limits set at the same time.
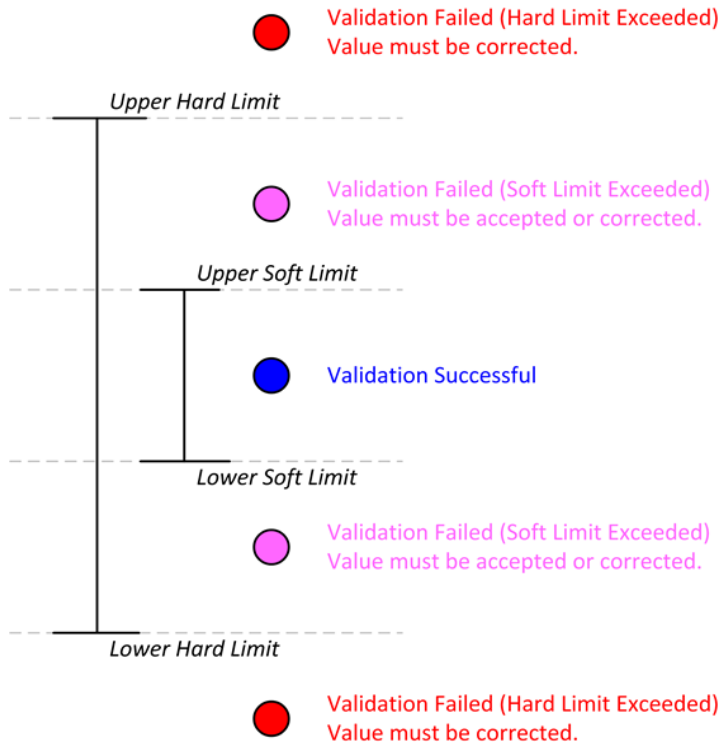
To assist in entering the correct values into a field, both ranges for the selected cell are displayed in the browser's status bar.

Validation Failure

When values are edited, data is validated using the configured properties for each field. For visual reference, the data changes colour if it fails the validation.

Note: These colours are configurable. The following descriptions of each colour state are correct for a default configuration only.

Colour	Description
Black	The value has not been modified.
Blue	The value has been modified from the original value.
Red	The value has failed validation, that is, it is out of range. This value must be corrected before saving.
Pink	The value is outside a soft range limit. You can right-click to either accept or ignore this value.
Green	The value is out of range but the operator has chosen to accepted it. The application will not prompt the user for additional action.
Orange	The value is of an invalid data type.
Gold	The value is out of range but the operator has chosen to ignore it. The application will prompt the user for action at the next stage of approval process.
Required	Some values may be deemed as function-critical and will be marked as Required. A light blue background indicates that a value needs to be entered before the report can be saved.
Read Only	A light grey background indicates that the value cannot be changed. This could be because the value is automatically collected, or it is a calculated value.

Data Distribution

After all the necessary data has been entered and checked through P2 Verify, the data is sent to P2 Server or to the destination database, for example to a data store repository. This occurs automatically after P2 Verify has reached the highest level of validation and has then been submitted.

The automatic data distribution will only take place for data submitted for the current production day. If the link between P2 Verify and P2 Server or the destination database is unavailable, the submission process will fail. The operator should attempt to resubmit the data later, when the link is available again.

Data distribution cannot be performed for a date range, and only one data distribution process occurs at any one time. If a report is re-submitted for a particular day, the data distribution will take place again.

Every entity in P2 Verify that is transferred to P2 Server will have a submitter and a destination tag name assigned. These tags directly correspond with tags in P2 Server or a data store repository.

Note: The data distribution process may take some time due to the amount of information that needs to be transferred and the safeguards that are employed to prevent data loss. You should expect the transfer to take up to a few minutes.

Data Areas

Typically, an area of plant or facility has its own hierarchy of operational personnel, and generally works independently of other operational areas. It may have different operational requirements as well, such as different production day schedules or different shift schedules.

Collection and submission requirements may therefore also differ between these areas. In P2 Verify, these are called Data Areas (or simply, Areas), and they must be defined separately.

Production Periods

Production days in data areas can be subdivided into blocks of time called Production Periods. A Production Period is the period of time in which an area operates. All areas have a minimum of one production period, but more can be added as required.

If P2 Verify is being used to capture shift-based data, shift production periods are assigned to an area. If monthly data needs to be captured, a monthly production period is assigned to the area.

The following production periods are available:

Shift

> Multiple shifts can be assigned for the day. These shifts do not have to be evenly spaced. For example, the first shift could be configured to go from 7:00am to 6:00pm, and the second shift from 6:00pm to 7:00am the next day.

Daily

> A daily production period is configured as a 24-hour shift. The time the that period starts can also be configured.

Weekly

> Weekly production periods can be configured to start on the first Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, or Sunday of a week. The time that the period starts can also be configured.

Monthly

> Monthly production periods can be configured to start on a specific date of a month, or on the first instance of a day (Monday, Tuesday, Wednesday, and so on). The time that the period starts can also be configured.

Quarterly

> Quarterly production periods can be configured to start on a specific date of a specific month. The time that the period starts can also be configured.

Yearly

> Yearly production periods can be configured to start on a specific day of the year. The time that the period starts can also be configured.

Layouts and Layout Mode

A Layout refers to the content of an Area in P2 Verify. It includes all tabs and all entities on the tabs.
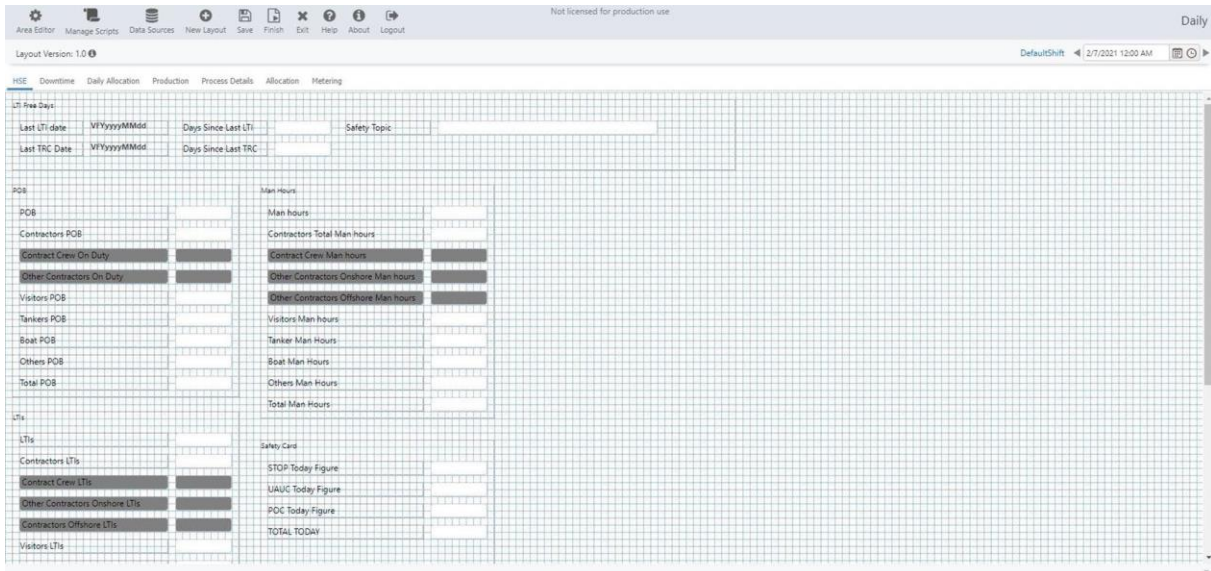
Layout Mode allows administrators to easily manipulate the tabs and entities on a page when changes are required.
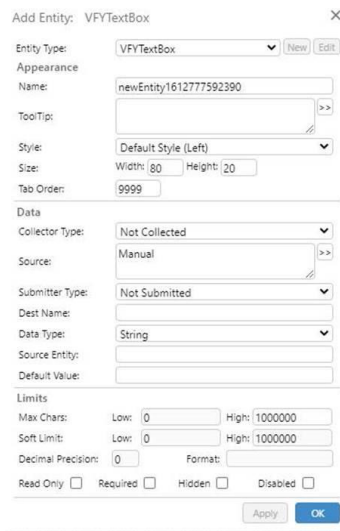
When in Layout Mode, entities and tabs can be added or edited by right-clicking on the page or the tab strip to open the edit menu. The functions available depend on what is being edited. You can:

- Add, edit, or remove a tab.
- Edit or remove an entity.
- Create a new entity.
- Reset the tab order for tabbing between entities on a page.

Layout Versions

P2 Verify collects data from plants and facilities, and systems that are expected to change over time. For example, a piece of equipment may come into use or be retired, new metering may be installed or whole new processes could be added. P2 Verify will need to be updated to reflect these changes. However, after changing the layout of P2 Verify to meet new conditions, we also want to be able to look back in time and see old layouts with the correct data.

For example, say a process was made redundant and we remove fields associated with it from P2 Verify. Now let's say we want to look at some historical data and we want to know what was flowing through that process two months ago. We would want to see a layout of the screen that shows the fields we have removed since then.

To assist with this process, P2 Verify allows different versions of the screen layout.

A layout version is a complete set of entities and tabs for a particular operational area. A layout version has an effective date and will be displayed from that date until a new layout version becomes effective. This way we are able to look at previous or future layout versions. For example, if we started on a new layout version today, we would be able to look at yesterday's date and see the old layout version with its tabs, inputs, labels, and so on.

When you create a new layout version, the system copies the entire layout of the previous version into the new version.   This becomes important when you create different layout versions for past dates. You need to be careful with your versioning so that you don't inadvertently lose some of your entities.
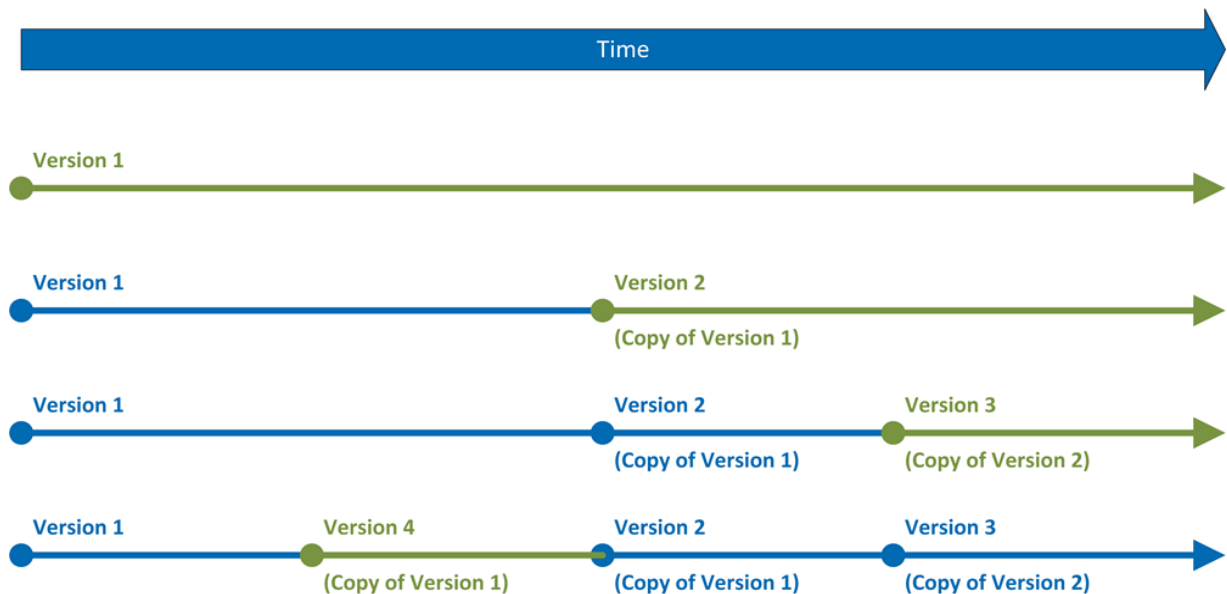
The example below and illustration above show how versioning works, and which entities are remembered between different versions:

1.   Create the initial layout on 1 January. This is layout **Version 1**.

2.   Create the next layout on 1 June. This creates layout **Version 2**, which is a copy of the previous layout Version 1.

3.   Create the next layout on 1 September. This creates layout **Version 3**, which is a copy of previous layout Version 2, which was created on 1 June. So Version 3 is a copy of Version 2.

4.   Using the date picker, change the date to 1 March. Create the next layout **Version 4**, which is a copy of previous version. However, the previous layout is Version 1, which was created on 1 January. So Version 4 is a copy of Version 1.

> **Tip:** When creating new layout versions, make sure the date is set to today's date, otherwise your versioning could get complicated and you may lose track of your entities. Alternatively, use the Layout Version Tracker form to keep track of your versioning.

It is important to note that layout versions retain only some of the item properties across versions. Layout Versions remember the following properties:

- Item name, that is, which items appear on the screen.

- Position of the item in the layout (x-y coordinates).

- The size of the item (height and width).

- Decimal precision of the item.

When you change any other property of an item, you change that property across all layout versions. If you want to change another property of an item but do not want to reflect that change across previous versions, you should create a new item and delete the old one.

Overview of the Interface

P2 Verify is an application that displays a page containing tabs of related production information. The operator interface runs in a Web browser and allows you to review, overwrite, and approve daily information before it is released to users off-site.

Although the bulk of the interface is defined by the administrator, a common header is shared between three different modes of operation. The available features depend on the mode that is currently active:

Layout Mode

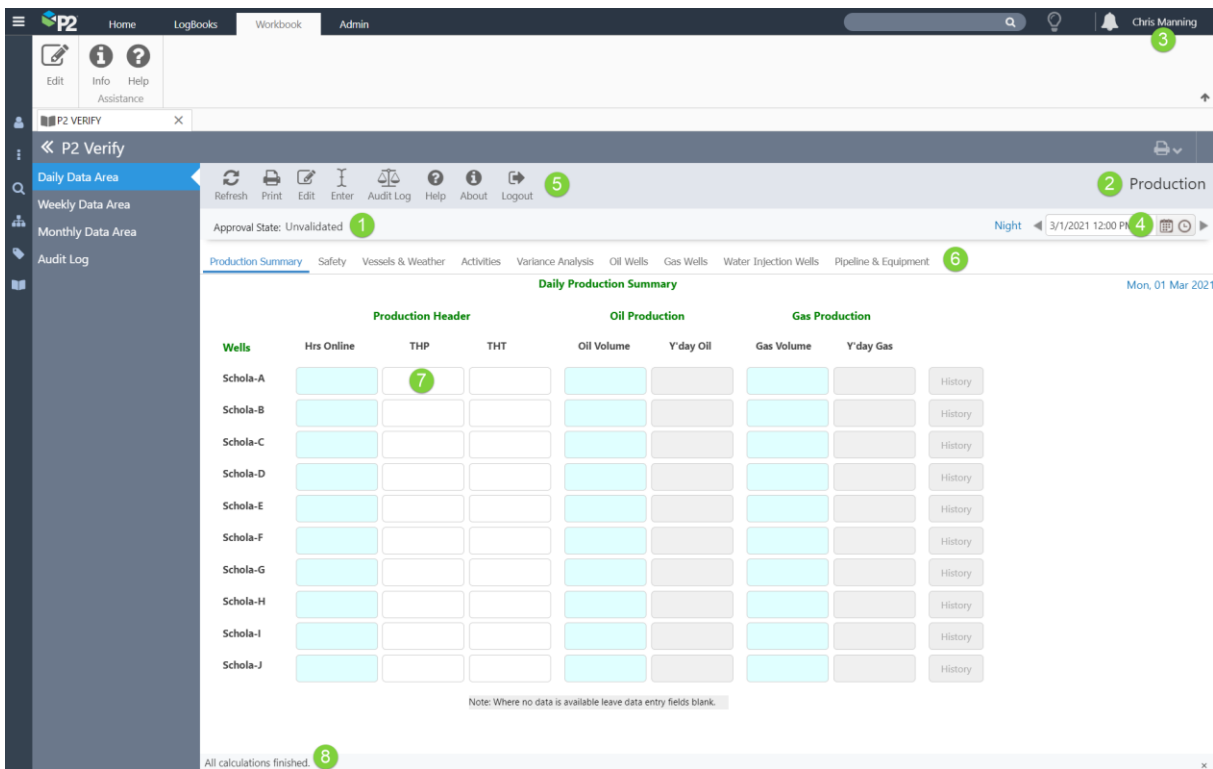Allows administrators to edit the layout of a Verify page.

Input Mode

Allows operators to enter data into entity fields.

Read-Only Mode

Restricts users to only view a Verify page. Data cannot be entered into any entity fields.

Note: P2 Verify is designed to be used on a screen with a resolution of 1024x768 pixels or above.

The important features are:

1. **Data Status Indicator**
    The status of the active tab for a selected date.

2. **Area Label**
    Name of the area in which the logged in user is working.

3. **User Name Indicator (if enabled)**
    The name of the user who is currently logged in.

4. **Date Picker**
    The date for which you are viewing the data. If a different layout was used on the selected date, you will view the layout in use on the selected date.

    The date picker navigates from production period to production period. This means that you can navigate through the shift, day, week, month, quarter, or year reports using the Previous and Next buttons. A tooltip appears on the Previous and Next buttons to indicate what the next and previous production periods are.

    Note: The list of shifts was removed in an earlier version.

5. **Toolbar Buttons**
    The buttons available at any given time depend on whether you are in Layout Mode, Input Mode, or Read-Only Mode.

    Layout Mode
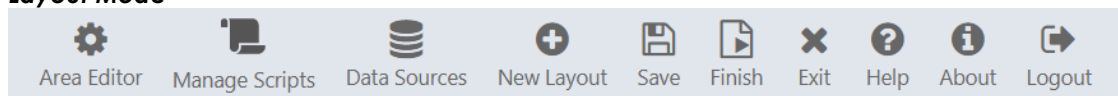
Input Mode
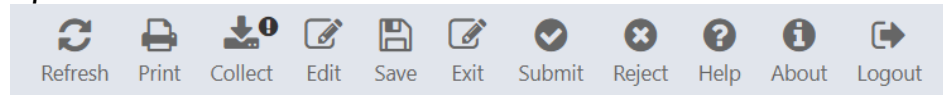
Read-Only Mode
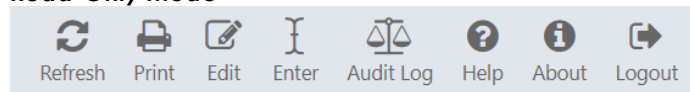
Buttons can be present in any combination from the following:

Area Editor
Invokes the Area Editor in a new browser window. Present only in Layout Mode.

Manage Scripts
Invokes the Script Manager in a new browser window. Present only in Layout Mode.

Data Sources
Invokes the Data Sources utility in a new browser window. Present only in Layout Mode.

New Layout
Creates a new layout version by copying the current layout at the selected date. Present only in Layout Mode.

Save
Saves any changes you make to collected or entered data on all tabs, or to the layout of entities on the page. Present in Input Mode and Layout Mode.

Exit
Returns the user to Read-Only Mode, and prompts to save if there is unsaved data. Any changes will be lost unless you first click **Save**. Present in Input Mode and Layout Mode.

Help
Opens a new browser window to display the Online Help. Present in all modes.

About
Displays the version, licensing and copyright information relating to P2 Verify that is installed on the server. Present in all modes.

Logout
Log off the current user and return to the login screen. Present in all modes.

Refresh
Reloads the report with the latest values. Present in Read-Only Mode and Input Mode.

Print
Prints the currently selected tab. Present in all modes.

Collect
Opens the Collection Wizard for data recollection or troubleshooting. Available only to users with permission to access this function. Present only in Input Mode.

Submit
Submits the data to the next level of approval. Present only in Input Mode.

Reject
Returns the data back to the previous level of approval. Only available if the report is past its first state. Present in Input Mode.

Edit

Switches to Edit Mode, where administrator users can change the layout. Present in Input Mode and Read-Only Mode.

Enter

Activates Input Mode, allowing you to input values into the editable entities in the area. Present only in Read-Only Mode.

Audit Log

Launches Auditing Web Viewer to show a log of changed entity values for this report. The System Administrator may choose to disable this button. Present only in Read-Only Mode.

6. **Tab Bar**

    All data is separated into different functional areas or logical groupings. Each grouping is displayed on a tab, allowing you to quickly sift through the data by clicking on each tab.

7. **Entities**

    Input fields into which data is entered.

8. **Status Bar**

    Displays information and messages in the following order:

Soft Limits

Displays the soft limits in the form **min/max**. You can enter values outside the soft limits as long as they are within hard limits. Visual indicators are used to mark values that are outside soft limits.

Hard Limits

Displays the hard limits in the form **min/max**. You cannot enter a value outside the hard limits.

Original Value

The original value of the currently selected entity. This is especially useful if a cell value has gone through a series of changes during the validation process.
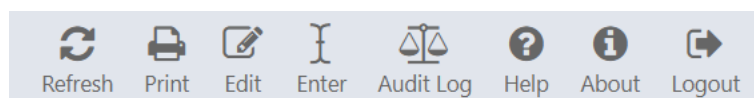
Previous Value

Displays the previous value of the currently selected entity.

Source

The source of the entity's value. This is usually either the calculation of the entity or the source *tag name* for the entity in the historian.
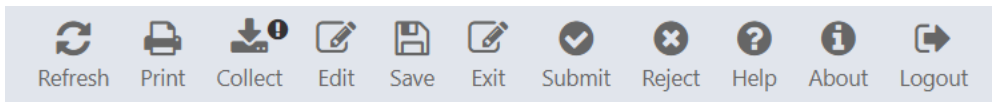
Read-Only Mode

Read-Only Mode is the default view everyone is presented with after logging into P2 Verify. It allows for a quick overview of the data, and allows you to switch to Input Mode if any values need changing. The toolbar displays the following options.

Refresh	Reloads the report with the latest values.
Print	Prints the currently selected tab.
Edit	Activates Edit Mode where administrator users can change the layout.
Enter	Activates Input Mode, allowing you to input values into the editable entities in the area.
Audit Log	Launches Auditing Web Viewer to show a log of changed entity values for this report. The System Administrator may choose to disable this button.
Help	Opens a new browser window to display the Online Help.
About	Displays the version, licensing and copyright information relating to P2 Verify that is installed on the server.
Logout	Logs off the current user and returns to the login screen.

Input Mode

Input Mode allows the user to change the data on the page, provided they have been assigned the appropriate security privileges. The toolbar displays the following options.

Refresh	Reloads the report with the latest values.
Print	Prints the currently selected tab.
Collect	Opens the Collection Wizard for data recollection or troubleshooting. Available only to users with permission to access this function.
Edit	Activates Edit Mode where administrator users can change the layout.
Save	Saves any changes you make to collected or entered data on all tabs, or to the layout of entities on the page.
Exit	Returns the user to Read-Only Mode, and prompts to save if there is unsaved data.
Submit	Submits the data to the next level of approval.
Reject	Returns the data back to the previous level of approval. Only available if the report is past its first state.
Help	Opens a new browser window to display the Online Help.
About	Displays the version, licensing and copyright information relating to P2 Verify that is installed on the server.
Logout	Logs off the current user and returns to the login screen.

Layout Mode

Layout Mode is only accessible to administrators, and enables them to edit all the properties of the layout as well as data distribution information. In this mode, administrators can also configure the validation rules described in Input Mode. The toolbar displays the following options.

⚙ Area Editor	📜 Manage Scripts	🗄 Data Sources	➕ New Layout	💾 Save	▶ Finish	✖ Exit	❓ Help	ℹ About	➡ Logout

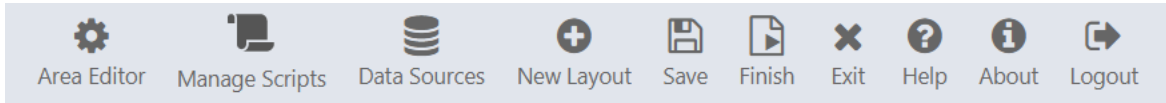|		
⚙ **Area Editor**	**Area Editor**	Invokes the Area Editor in a new browser window.
📜 **Manage Scripts**	**Manage Scripts**	Invokes the Script Manager in a new browser window.
🗄 **Data Sources**	**Data Sources**	Invokes the Data Sources utility in a new browser window.
➕ **New Layout**	**New Layout**	Creates a new layout version by copying the current layout at the selected date.
💾 **Save**	**Save**	Saves any changes you make to collected or entered data on all tabs, or to the layout of entities on the page.
▶ **Finish**	**Finish**	Saves all changes and returns to Read-Only Mode.
✖ **Exit**	**Exit**	Returns to Read-Only Mode, and prompts to save if there is unsaved data.
❓ **Help**	**Help**	Opens a new browser window to display the Online Help.
ℹ **About**	**About**	Displays the version, licensing and copyright information relating to P2 Verify that is installed on the server.
➡ **Logout**	**Logout**	Logs off the current user and returns to the login screen.

Date Picker

The Date Picker allows you to navigate between production periods.
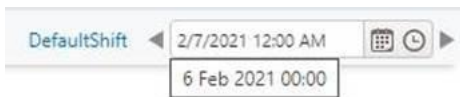
| DefaultShift ◀ 2/7/2021 12:00 AM 📅 🕐 ▶ |
| 6 Feb 2021 00:00 |

This means that you can navigate through the shift, day, week, month, quarter, or year reports using the Previous and Next buttons. A tooltip appears on the Previous and Next buttons to indicate what the next and previous production periods are.

▸ Click the text between the two arrows to display a calendar, which allows you to select the production period for a specified date and time.

Area Picker

The Area Picker page displays a drop-down list of all areas that you have access to.

To access the current report for a data area:

1. Click the Data area drop-down list and select an area.

2. Click either **Read Only Mode** or **Input Mode** (if you have permission to edit).

You are forwarded to the current report for that area.

> **Note:** For Administration users, the Area Picker page also displays a list of tabs that are currently locked when a data area is selected. See the *P2 Verify Administrator's Guide* for more information.

Entities and Controls

Visible items on a P2 Verify page are called entities and are represented by various visual controls. The controls include labels, text boxes, lists, buttons, and so on. Layout Mode allows P2 Verify administrators to add, move, and remove entities as necessary.

Entities may be editable or displayed as read-only controls. There are three possible causes for an entity to become read-only:

*   A control contains a read-only **calculated** entity. A calculated entity gets its value from a calculation instead of manual entry. You can only change the value of a read-only calculated entity by changing the values of the entities from which the calculation is derived.

*   An entity is a **collected value**. To limit the amount of manual entry operators have to do, as many values as possible are automatically collected from the historians, and this operation takes place at the end of the shift period; collected value entities may be locked until after collection, to prevent entered data from being overwritten by the collected data.

*   A System Administrator has set the entity to **read-only** or has **disabled** it.

Sometimes, you may not be able to enter any values at all, even if you have sufficient permissions. There are two reasons for this:

*   A report has already moved past your level of submission. This means that your task for this date is finished and you will need to contact your supervisor if you want to change any values after the report has moved beyond your level of submission.

- A report is currently locked for editing by another user. This means you will have to wait until this person has finished before you can continue, or ask a System Administrator to clear the locks.

The types of controls that can be created are described in the following sections.

Note: The VFYDowntimeList control is deprecated and should not be used.

Lookup Tables

The **VFYLookupTable** control allows you to use one or more values to derive another, working in much the same way as it would in a spreadsheet application.

Shift Hours	6

Lookup tables can be used to map columns and rows so that particular values can be referenced from a cell, depending on its X-Y position. As an example, the following diagram can be used to reference column 6 and row 2 to produce a value of 1800.

	1	2	3	4	5	6	7	8	9
1	100	200	300	400	500	600	700	800	900
2	300	600	900	1200	1500	1800	2100	2400	2700
3	500	1000	1500	2000	2500	3000	3500	4000	4500

Text Boxes

Three types of text boxes can be configured.

Note: For rounding to work, make sure a selected control uses the appropriate decimal precision for the entity.

VFYTextBox

Input cells into which data can be entered. They can have range limits, be required, be read-only, and so on. The value displayed may be formatted (For example, with a comma as the thousands separator) and have a different decimal precision than the value that is saved.

STOP Today Figure	25

Note: For VFYTextBoxes, if the data type is set to *string*, then the Hard high limit will become a **Max Chars** attribute and all other limits fields will be greyed out. This attribute will then be set as the maximum length of the text box allowed in input mode. The user will be unable to submit a report if this field does not pass validation.

VFYTextBoxCalc

Calculation entities are inputs that allow you to do simple calculations on the screen. If the entity is not read-only, the calculated text box field becomes editable, allowing the user to overwrite the

calculated value. If the user overwrites the original calculated value, the background colour will change to a pale yellow. To recalculate the value, delete the existing value.

VFYTEXTBOXDATA

A read-only text box that displays the value of an entity in a different Data Area.

> **Note:** The data area that you are fetching data from must have the same timestamp; i.e. the start date of the report with the VFYTextBoxData entity must exactly match the start date of the report that the source entity is in.

Images

VFYAreaStateImage displays the state of a Data Area as an image. You can use different image files to represent the various states of the configured data areas. For example, you could use a green circle image and a red circle image to represent traffic light indicators.

Buttons

The **VFYButton** control represents a button that is typically used to trigger a scripted action.

Combo Boxes

Four types of combo boxes may be configured.

VFYCOMBOBOX

The standard combo box is a drop-down list box that has predefined options from which the user can choose. For example, a list of percentage values.

Running GTC (either GTC-A or GTC-B)   GTC-A ▾
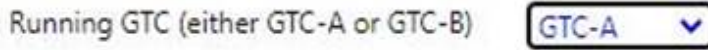
VFYCOMBOBOXCALC

The Combo Box Calc is similar to the standard Combo Box, except that the value of this combo box may be set to the results of a calculation, if its value is blank or set to blank. This is useful for setting a default value when no input is made in that field.

VFYENTITYCOMBOBOX

The Entity Combo Box obtains its item list from a hierarchy repository, for example from P2 Server asset hierarchy.

VFYADHOCCOMBOBOX

The Ad Hoc Combo Box obtains its item list from a hierarchy repository, for example from P2 Server asset hierarchy. It must be used within a dynamic list, and it is able to populate the values in other columns in the row by fetching the templated attribute or property of the selected entity.

Note: To be used within Dynamic Lists only.

VFYLINKEDCOMBOBOX

The Ad Hoc Combo Box obtains its item list from a hierarchy repository, for example from P2 Server asset hierarchy. It must be used in conjunction with an Ad Hoc Combo Box in a Dynamic List. When embedded in a dynamic list, the selection in this combo box resets the item list of an accompanying Ad Hoc Combo Box, by changing the parent node of the hierarchy that the AdHoc Combo Box uses.

Note: To be used within Dynamic Lists only, together with a VFYAdHocComboBox control.

Comments

Three types of comment facilities can be added to a Verify page.

VFYCOMMENTSBOX

The **VFYCommentsBox** control is a free-form text input box with scrollbars.
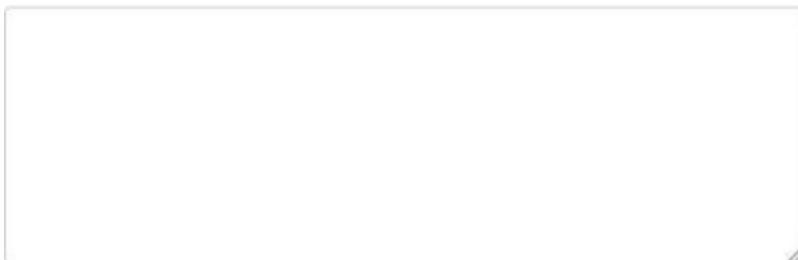
Note: For VFYCommentBoxes, if the data type is set to *string*, then the Hard high limit will become a **Max Chars** attribute and all other limits fields will be greyed out. This attribute will then be set as the maximum length of the text box allowed in input mode. The user will be unable to submit a report if this field does not pass validation.

VFYCOMMENTSBOXCALC

The **VFYCommentsBoxCalc** control is similar to the standard Comments Box, except that the value of this comments box may be set to the results of a calculation, if its value is blank or set to blank. This is useful for setting a default value when no input is made in that field.

VFYCOMMENTSLIST

Note: This control was deprecated in version 1.16. New customers should avoid using the control.

The **VFYCommentsList** control is an advanced control that allows users to make comments on any aspect of the data in P2 Verify or the layout of P2 Verify. The object is designed to be placed on its own tab. Refer to Using the Comments List (see page 50) for more details on using this control.

Date/Time

The **VFYDateTime** entity allows an operator to enter a formatted date or date/time input. You can click the browse (ellipsis) button and use the Date/Time Picker to set the value, or input the value directly in the date/time field. When the date/time field has no value, the expected format appears in grey font colour in the field:

This helps you to know what date/time format is expected in that field.
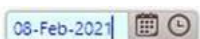
For a list of supported Date/Time format strings, refer to *Appendix A* (see page 55).

Dynamic Lists

The **VFYDynamicList** entity is a free-form input table consisting of any number of column input fields, and can consist of the following controls:

- VFYActiveComboBox
- VFYComboBox
- VFYComboBoxCalc
- VFYCommentsBox
- VFYCommentsBoxCalc
- VFYDateTime
- VFYEntityComboBox
- VFYLabel
- VFYTextBox
- VFYTextBoxCalc

You can add or remove rows from this table as required. Due to the Dynamic List's ability to dynamically increase or decrease the data in its list, it is usually associated with managing

relational data instead of time series data. The controls defined in a dynamic list do not have the ability to collect data, and cannot submit data on their own. A customised submitter adaptor needs to be written if the distribution of the data associated with the entity is required.

Note: Submitters used for dynamic lists must be able to support multiple entities.

Group Boxes

A **VFYGroupBox** control is used for display purposes only, and assists in providing clean layouts by grouping related items and providing context.

When moving a group box in layout mode, first select the group box by clicking inside it, then move the mouse pointer to the top left of the group box. When the mouse pointer changes to the move icon, you can click and drag to move the group box along with all the entities inside the selected box.

Note: Double-clicking on a group box while it is selected will deselect it. To access the Entity Editor while the group box is selected, right-click on the group box and select **Edit**.

Labels

The **VFYLabel** entity is a plain text label that is placed on P2 Verify pages to describe inputs, drop-down lists, and so on. They generally help the user to understand what needs to be entered, as "Total Metered Production" label in the example below:

iFrames

A **VFYIFrame** control allows you to embed other objects, such as websites or P2 Explorer pages, into your page. P2 Verify will automatically append several URL parameters, such as the report date and the data area name, onto the end of the URL entered in the Entity Editor, to enable the embedded application to display the appropriate details for the current report.

However, this means that some websites that do not expect those URL parameters may not work.

Getting Started

Before you start you will need:

User name and password
> Normally this will be your standard network login. Check with your System Administrator if you are unsure.

Web address (URL) for accessing P2 Verify
> Available from your System Administrator.

Web browser and access to the corporate intranet
> Required to access the P2 Verify web interface.

Launching P2 Verify

P2 Verify does not provide a home page as it is often integrated with P2 Explorer.

To launch P2 Verify and log in:

1.   Open a browser window.

2.   In the address bar, type the URL of P2 Explorer supplied by your System Administrator. It will be something like:

     https://[server]/P2.Explorer

     Click on any links required to access P2 Verify, as directed by your System Administrator. The link to P2 Verify is usually available via P2 Explorer or on your corporate intranet.

3.   When prompted to do so, enter your user name and password, and then click the **Login** button.

     If the login is unsuccessful, you can attempt to log in again, or contact your System Administrator if you have forgotten your login details.

4.   On the P2 Explorer menu, click **Verify**, and select a page from the shortcut menu.

     Data areas *Production* and *Monthly*, presented in the example below, may be replaced by data areas specific to your system's configuration.
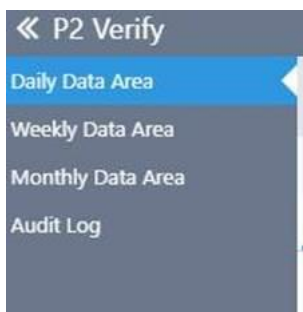
For example, select a Production page.
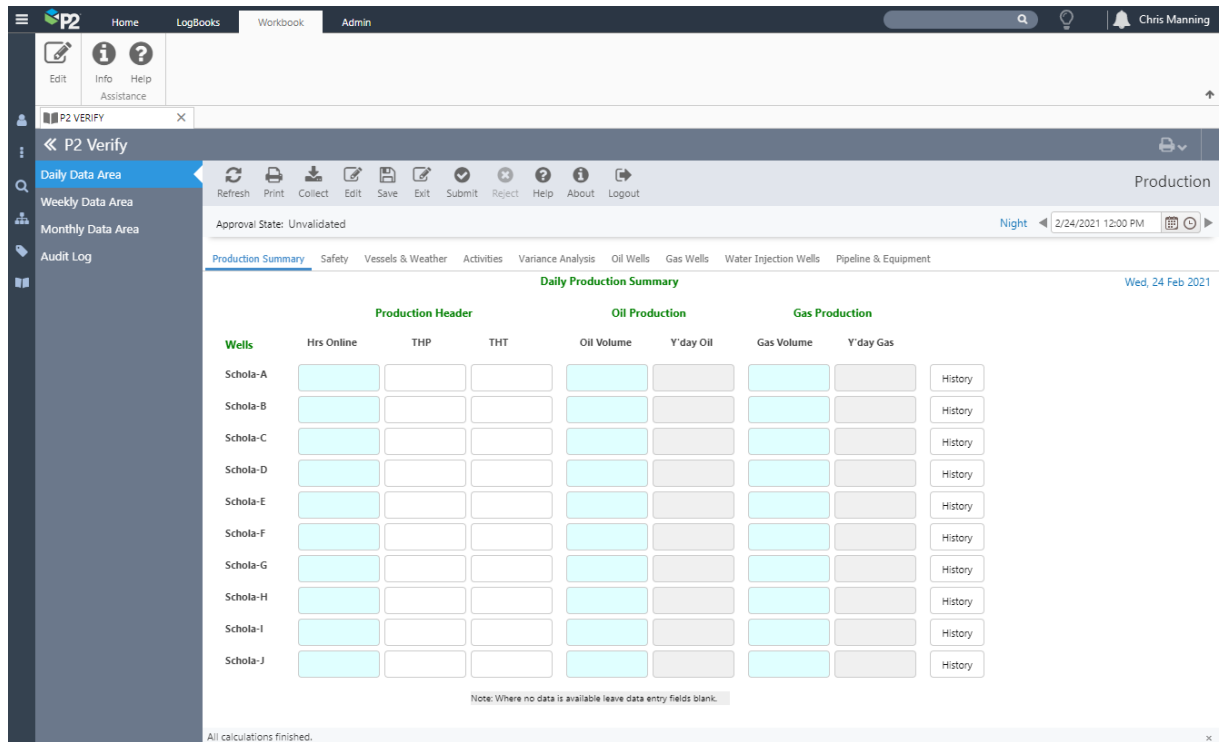
The available options will depend on your local configuration.

You may now start using P2 Verify.

It is also possible to open a particular page directly.

To launch P2 Verify and log in:

1.   Open a new browser window.

In the address bar, type the URL supplied by your System Administrator. It will be something like:
https://[server]/P2.Explorer

Click any links required to access P2 Verify, as directed by your System Administrator. The link to P2 Verify is usually available via P2 Explorer or on your corporate intranet.

2.   When prompted to do so, enter your user name and password, and then click the **Login** button.
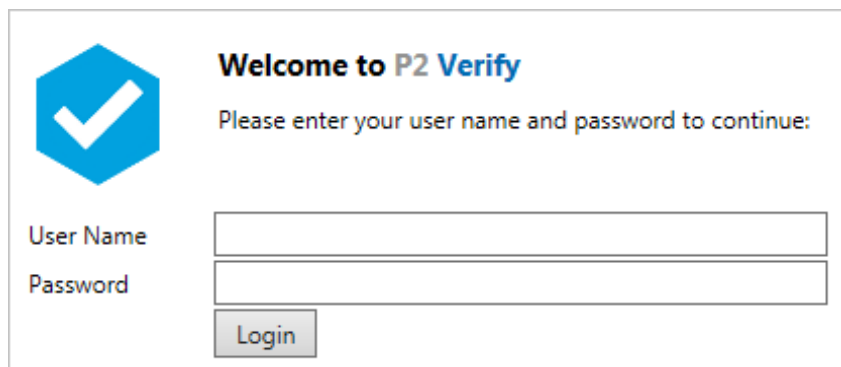
On successful login, you are directed to the requested page.

If the login is unsuccessful, an error message appears. You can attempt to log in again, or contact your System Administrator if you have forgotten your login details.

Changing Your Password

Your System Administrator controls all user names and passwords. If you need to change your password, contact your System Administrator.

Logging Out

▸   To log out, click **Logout** on the P2 Verify toolbar.

Using P2 Verify

This section describes how to use P2 Verify to review, modify, and approve daily information before it is released to users off-site.

Entering Data Values

When you first log in, the last unapproved report tab is displayed in **Read-Only Mode**.

To start entering data:

1.   Click the **Enter** button on the Verify toolbar to change to **Input Mode**.

2.   Type in any field that does not have a grey background.

3.   As you enter data, the colour of the text may change if the value is outside the range of defined limits.

4.   If the text colour changes, revise them as required.

5.   You can use the *Tab* key to navigate through the entities. The order is determined by an administrator.

6.   When you have finished entering data, click **Save** on the Verify toolbar to save your changes.

7.   If appropriate, click the **Submit** button to submit your report for validation.

Note: Clicking the **Exit** button will revert you to **Read-Only Mode** and you will lose any unsaved changes.

Formatted Values

Text boxes that display a real or integer value may be configured to display the number in a specific format.

When you are editing the value in these text boxes, the full decimal precision of the value is displayed; for example:

Test Formatting   123.456

However, upon leaving the text box (such as when you click another text box), the value displayed will be automatically formatted according to the format specified for that entity.

Examples of formatting include a comma separator (to separate *thousand* values), reduced decimal precision, or adding a prefix.

In the following example, the text value *123.456* is formatted to a more recognisable dollar value rounded to two decimal places:

Test Formatting $123.46

> **Note:** The formatted value is for display only. When the value is saved, distributed, or referenced in a calculation, the full decimal precision of the value is used.

Out of Range Values

When the value of an item is outside its configured validation parameters, the colour of the value will change depending on whether it is outside the hard limits (indicated by RED text), outside the soft limits (indicated by PINK text) or cannot be assigned to a selected data type (indicated by ORANGE text). The action taken depends on the type of validation error.

> **Note:** Colours are configurable, so they may be different on your system. If the colours on your system are different to the ones mentioned here, ask your System Administrator for clarification.

The value needs to be changed, accepted, or ignored; the last two options are available only for the values that exceed soft limits. When a value has been marked as ignored (indicated by GOLD text), at the next stage of the approval process it will need to be accepted or marked as ignored again. When a value has been accepted (indicated by GREEN text), it will not require further action from the user.
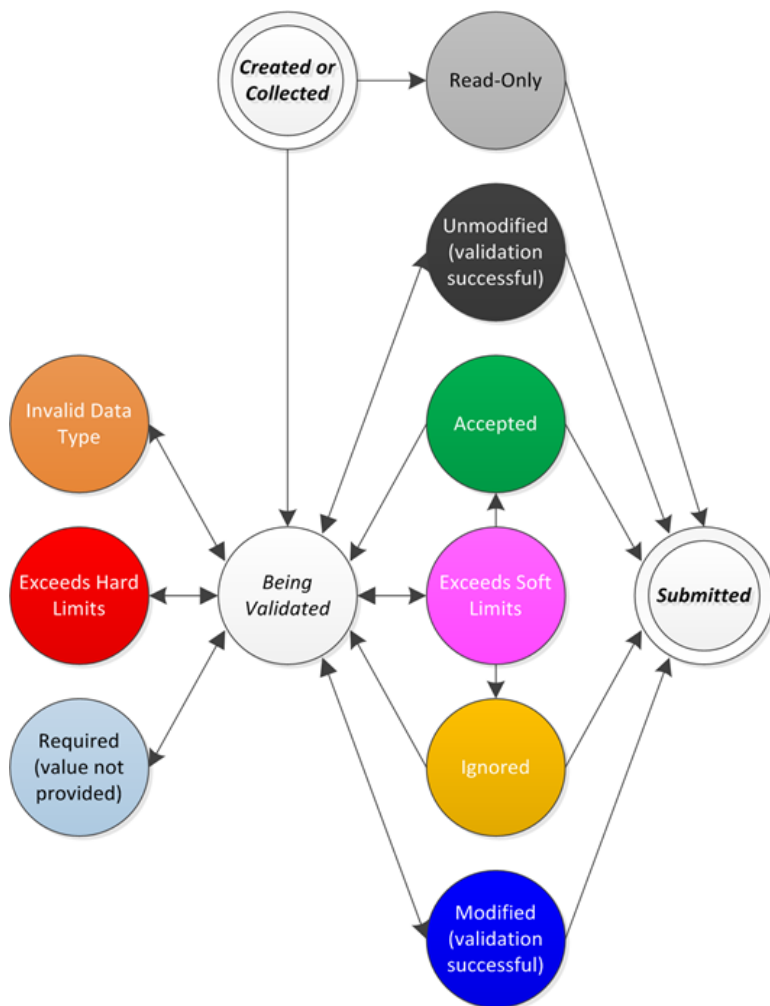
> **Note:** These colours will not appear in read-only entities, as no validation is performed on fields that cannot be edited. This includes calculated data fields.

Accepting or Ignoring Out of Range Values

There are three ways to treat out of range values. The guidelines are as follows:

RED or **ORANGE - Change the value**

If the value is either RED (*hard limit exceeded*) ORANGE (*invalid data type*) the only action available is to change the value so that it is within the validation parameters of the entity. To change a value, click in the relevant control and type the new value.

▸ To change the value, click in the relevant control and type the new value for the entity.

PINK - Change, accept or ignore the value

If the value is PINK (*soft limit exceeded*) the value is failing validation, and you have three options to progress the workflow:

Change the value

Change the value so that it is within the validation parameters of the item. To change a value, click in the relevant field and type the new value.

Accept the value

If you choose to accept the value, you are specifying that the value is correct, even though it is not within the specified range. To accept the value, right-click the relevant field and click **Accept** from the shortcut menu. After you accept the value, the text will change to GREEN.

Ignore the value

If you choose to ignore the value, you are effectively marking it as *suspicious* and passing the validation to the next person in the approval chain. To ignore the value, right-click the relevant field and click **Ignore** from the shortcut menu. After you have ignored the value, the text will change to GOLD, marking it as suspicious.

▸ To accept or ignore the value, right-click the relevant field and click **Accept** or **Ignore** from the shortcut menu.

Note: The last person in the submission chain cannot ignore a value; they must accept it or change the value.

SUSPICIOUS VALUES

If a value appears in GOLD, this means that it has been previously ignored.

▸ You can decide to accept it by right-clicking the value and choosing **Accept**.

After you accept the value, the text colour changes to GREEN.

Bad Values

If a value is being collected automatically but it consistently collects a bad value, then you should contact the System Administrator.

There can be several reasons for a bad value, such as bad configuration or bad metering, which can normally be easily resolved.

Missing Values

If a value is not being automatically collected, and you believe that it should be, contact your System Administrator and let them know which tags you would like to automatically collect.

Calculated Fields

Some values displayed in P2 Verify are calculated automatically from other fields. In as many cases as possible, these fields are arranged so that it is easy to see how the calculated value is derived.

Calculated fields exist in two modes: **read-only** and **editable**.

READ-ONLY FIELDS

Calculated fields that are read-only have a grey background colour to indicate that these cannot be edited directly.

To change the value of a read-only calculated field, you need to modify one or more of the fields from which the calculation is derived. As you change one of these fields, the calculation will be automatically updated.

For example, a Total value is often automatically calculated from several input fields. To change the total, you need to change one of the input fields.

EDITABLE FIELDS

Calculated fields that have not been configured as read-only are editable. These fields have a white background colour to indicate that these can be edited directly.

▶ To change the value of a calculated field, type over the original calculated value.

When you tab out of the field, the background colour of the field changes to pale yellow, indicating that the calculated value has now been overwritten.

Note: After the value in the calculated field is overwritten, the value will not change, even if any of the input fields for the calculation are modified.

▶ To recalculate the value, delete the existing value in the field.

Locked Tabs

When a user is accessing a tab in Input mode, that tab in that data area for that production period is locked by the user. This prevents other users from accessing the same fields and potentially overriding each other's values. However, users may still access other tabs that have not been locked.

If you try to access a report that has **all** of its tabs locked by other users, the following message appears:
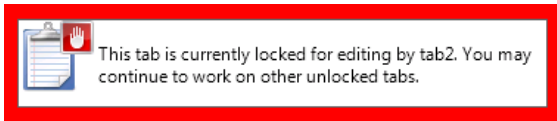
You will not be able to navigate to the Input mode for that report.

▸   Contact an administrator to clear the locks and grant access to other users.

If one or more tabs in a report have been locked by another user, the following message appears when trying to access a locked tab:

Saving Data

Sometimes, you may want to enter data into P2 Verify but don't want to submit it for validation just yet. To make sure you don't lose the data you entered, you need to save it.

▸   To save data to the Verify database, click the **Save** button on the Verify toolbar.

This will save the current values to the database regardless of validation.

Data Errors

Any entity that is in error after a failed collection or submission, will be surrounded by a red border on the Verify page.


▸   To get a brief description of the problem, hover the mouse pointer over the red error icon.

▸   To see the error message, click the error icon. The message appears in the lower pane of the dialog box.

When you get an error, there are usually two options available.

Option 1: Click the **Submit** or **Collect** button on the Verify toolbar to attempt the process again.

Option 2: Clear the error condition directly by right-clicking the red-bordered entity and choosing **Clear Error**.
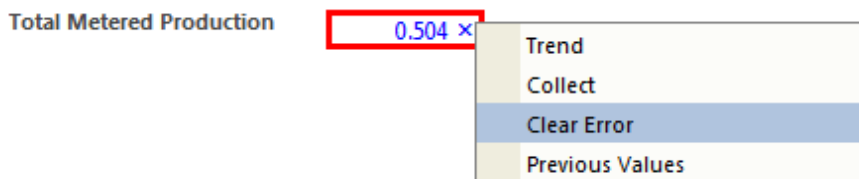
Option 3: Contact your System Administrator with details about the entity name and the error message.

COPY THE ERROR TO AN EMAIL

You will need to send the details of the error to your System Administrator. To do this:

1.   Click the **Copy** button to copy the details about the failed entities to your computer's clipboard.

2.   From there, they can be pasted into an email or other notification for your System Administrator.

Collecting Data

▶   You can force a data collection to take place by clicking the **Collect** button while in Input Mode.

A forced data collection is often called a *Recollection*.

Upon clicking the Collect button, the P2 Verify Collection Wizard appears.
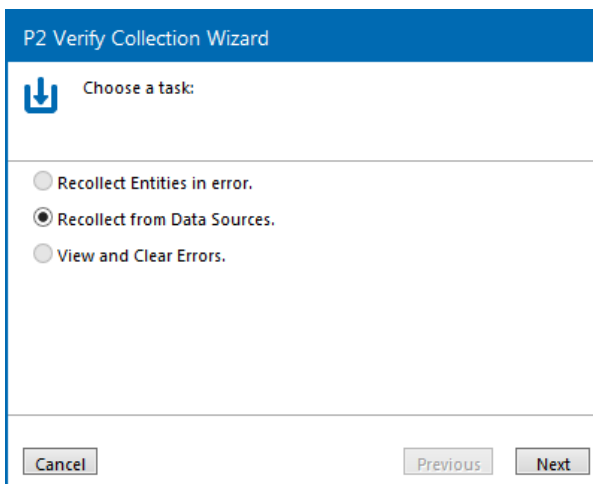
The P2 Verify Collection Wizard allows you to perform three tasks:

•   Recollect any entities that failed to be collected for the current report. (see page 37)

•   Recollect all entities from specified data sources. (see page 40)

•   View and clear errors from any failed entities for the current report. (see page 42)
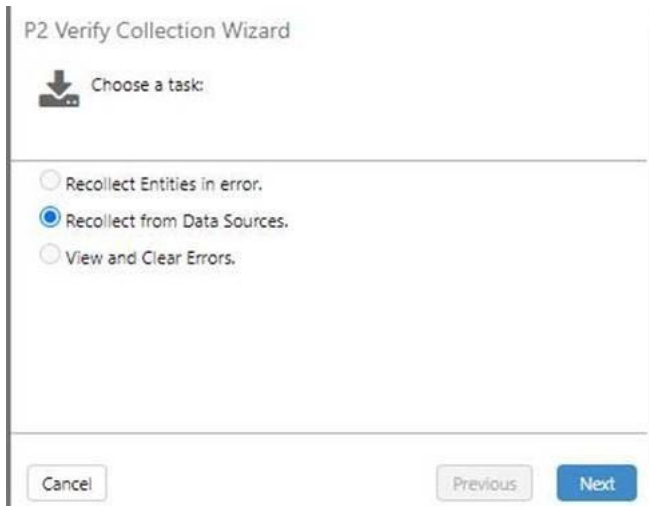
You can also collect values for:

•   A single entity (see page 43)

•   All entities in a tab (see page 44)

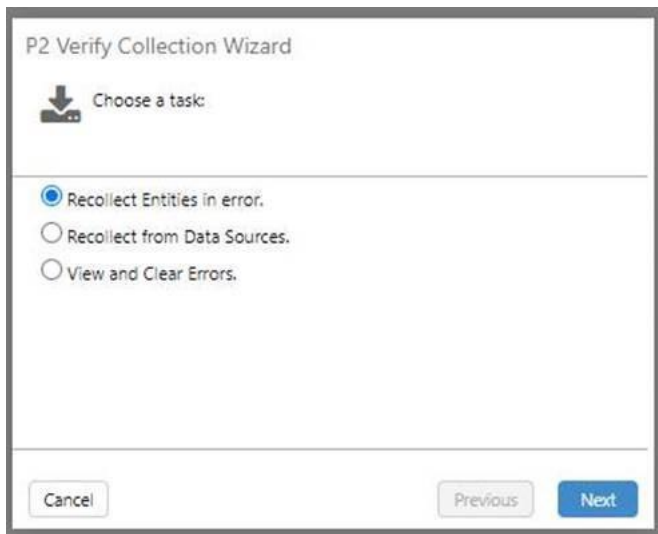## *Recollecting Entities in Error*

If some entities have not been automatically collected from their Datasource, you can choose to recollect only those entities.

1.   In the Collection Wizard:

      a.   Select **Recollect Entities in error**.

b.   Click **Next**.

The **Recollect Entities in Error** dialog box appears. All entities that failed to be collected from their data source are listed.

Entities in error are grouped according to Collector Type.

To view the error message for a particular entity, click the error icon next to that entity to display the message in the lower pane. Hovering the mouse pointer over the icon will also display the error message in a tooltip.

2.   In the **Recollect Entities in Error** dialog box:

a.   Select the entities to be recollected. You can either select the check box for a Collector Type to choose all the entities for that type, or select individual entity check boxes.

b.   Click **Next**.

A confirmation message appears.

If there are any changes to the report that have not yet been saved, you now have the chance to save them before recollecting. If you do not save the report, any changes you have made since the last time you saved will be lost.

Note: Regardless of whether you save changes or not, any values inside the selected entities will be overwritten with new values from the Datasource.

3. In the confirmation screen:

    a. Select **Save** or **Don't save**, as appropriate.

    b. Click **OK** to commence recollection.

        When recollection has finished, the **Finished** dialog box appears. All the entities that were recollected are listed, along with any errors that reoccurred.
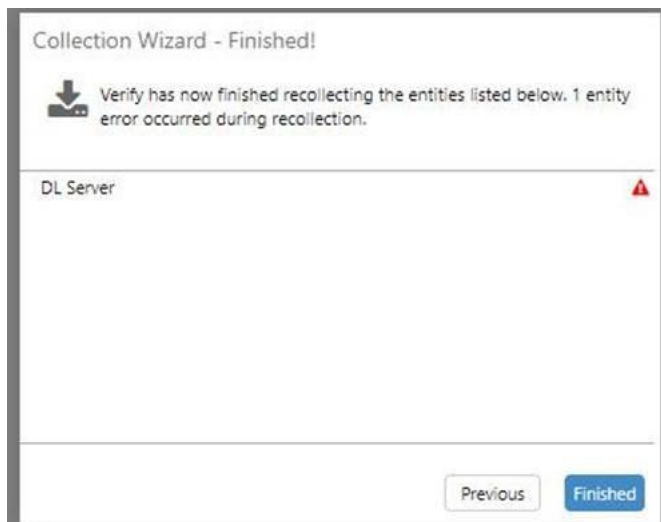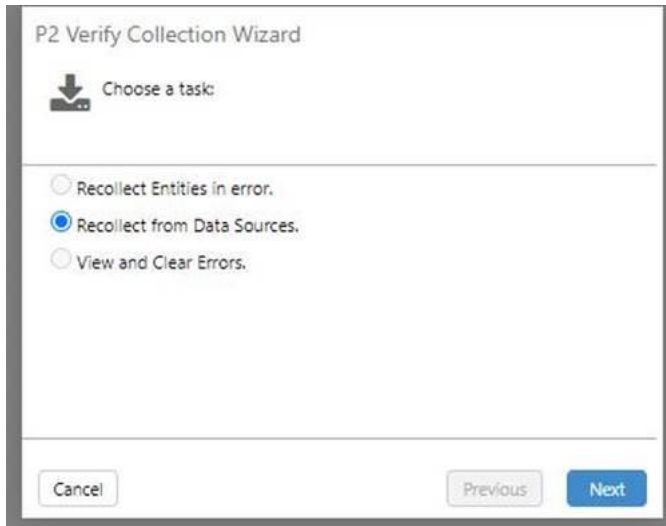

        If an error occurred, hover the pointer over the error icon to see the message in a tooltip.

    c. Click **Finished**.

Recollecting from Data Sources

If you need to recollect all entities from a particular data source, you can choose the data source to recollect from.

1.   In the Collection Wizard:

a.   Select the **Recollect from Data Sources** option.

b.   Click **Next**.

The **Recollect from Data Sources** dialog box appears. The data sources used to collect values are listed, along with the number of errors associated with each data source.
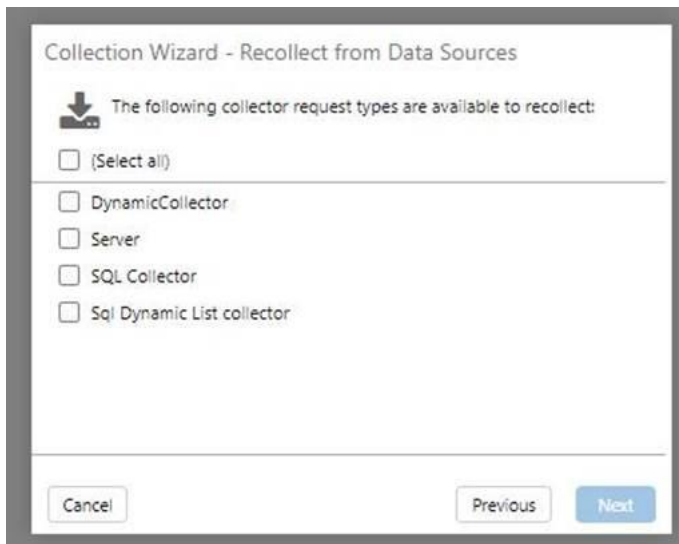
2.   In the **Recollect from Data Sources** dialog box:

a.   Select the check box for each data source that you want to collect values from, or select the **(Select All)** check box if you want to select all of the listed data sources.

b.   Click **Next**.

A confirmation message appears.
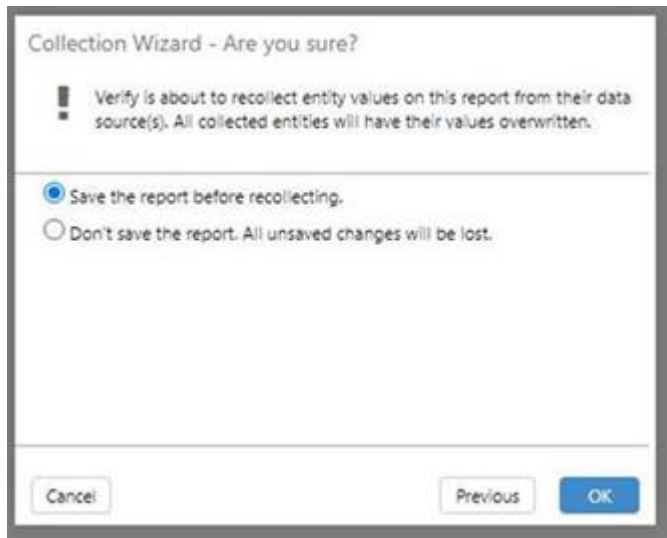
If there are any changes to the report that have not yet been saved, you now have the chance to save them before recollecting. If you do not save the report, any changes you have made since the last time you saved will be lost.

Note: Regardless of whether you save changes or not, any values inside the selected entities will be overwritten with new values from the Datasource.

3. In the confirmation message:

   a. Click **Save** or **Don't save**, as appropriate.

   b. Click **OK** to commence recollection.

      When recollection has finished, all the entities that were recollected are listed, along with any errors that occurred.
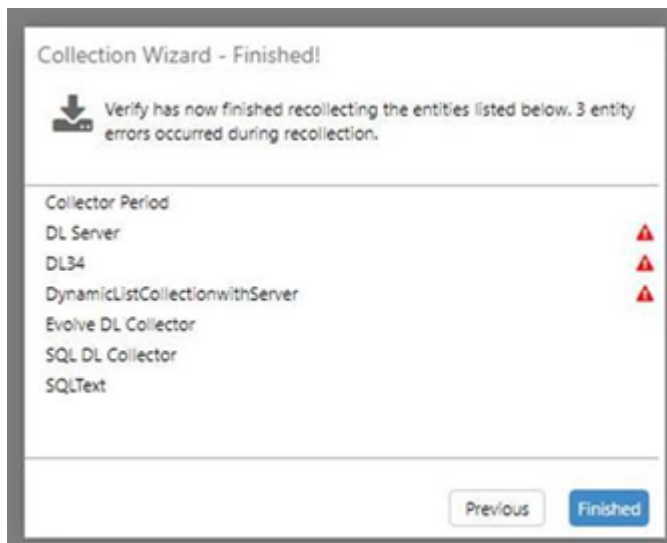
      If an error occurred, hover the pointer over the error icon to see the message in a tooltip.

   c. Click **Finished**.

View or Clear Entity Errors

For the current report, you may need to view or clear errors from any failed entities.

1. In the **Collection Wizard**:

    a. Click the **View and Clear Errors** option.

    b. Click **Next**.
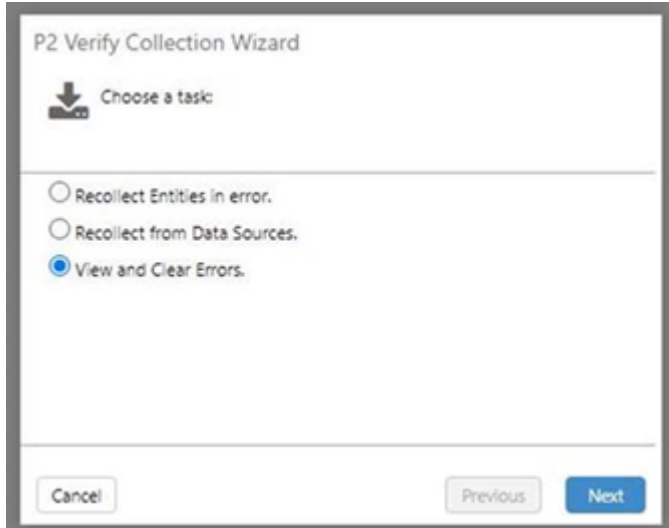
The **View and Clear Errors** dialog box appears. All errors on the current report are listed.
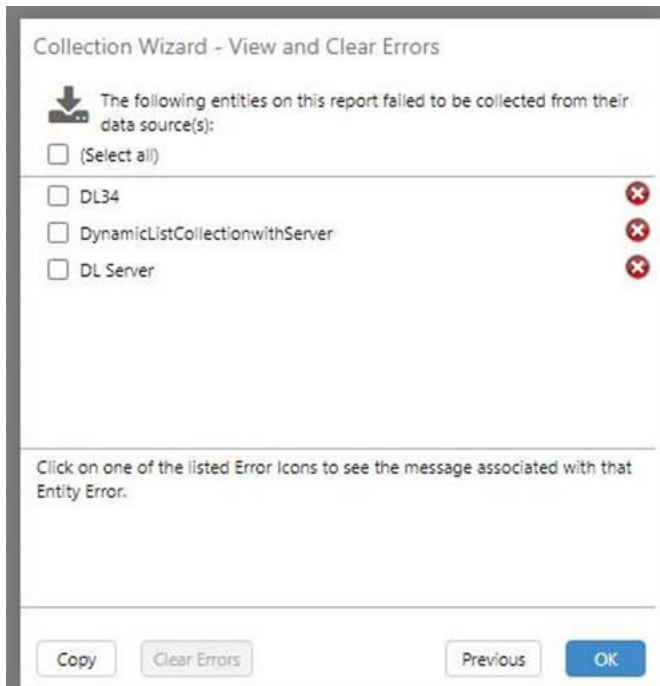
2. Clicking one of the error icons to display the error message for that entity in the lower pane.

    Alternatively, you may hover the mouse pointer over the icon to display the error message in a tooltip.

    From here you have two options:

    –   Copy the errors onto the clipboard.

        i.   To copy all the errors to your clipboard, click **Copy**.

                 Alternatively, you can select only specific errors and then click **Copy**.

        ii.   Paste the copied errors into an email or document. You can choose to email this to the System Administrator for help in resolving the errors.

    –   Remove the error.

        i.   Select the errors you want to remove.

        ii.   Click **Clear Errors**.

The entities will no longer show an error and will no longer feature a red border on the page.

3.   When you have finished, click **OK**.

Collecting an Entity

To collect the value of a single entity, enter Input Mode and do the following:

1.   Right-click on the entity. If the entity is configured with a collector and you have the rights to perform collection, a **Collect** option will be available in the shortcut menu.
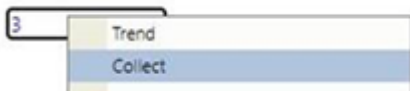
2.   Select **Collect**.
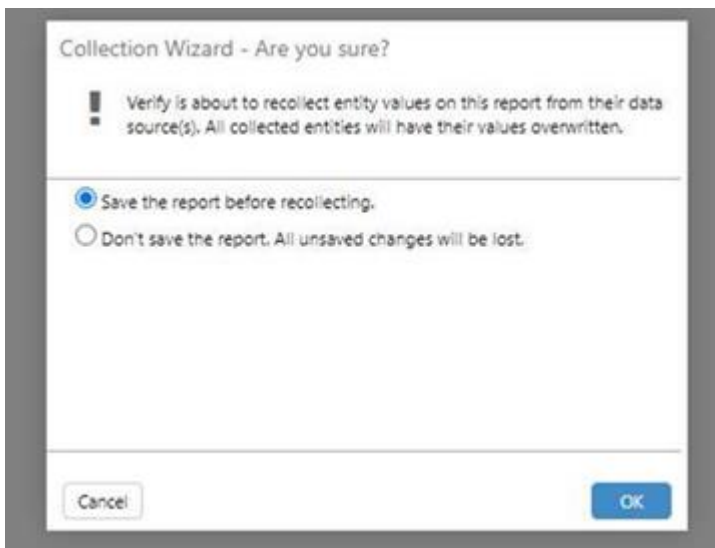
If there are any changes to the report that have not yet been saved, you now have the chance to save them before recollecting. If you do not save the report, any changes you have made since the last time you saved will be lost.

Note: Regardless of whether you save changes or not, any values inside the selected entities will be overwritten with new values from the Datasource.

3.   In the confirmation message:

    a.   Click **Save** or **Don't save**, as appropriate.

    b.   Click **OK** to commence recollection.

When recollection has finished, the entity that was recollected is listed.
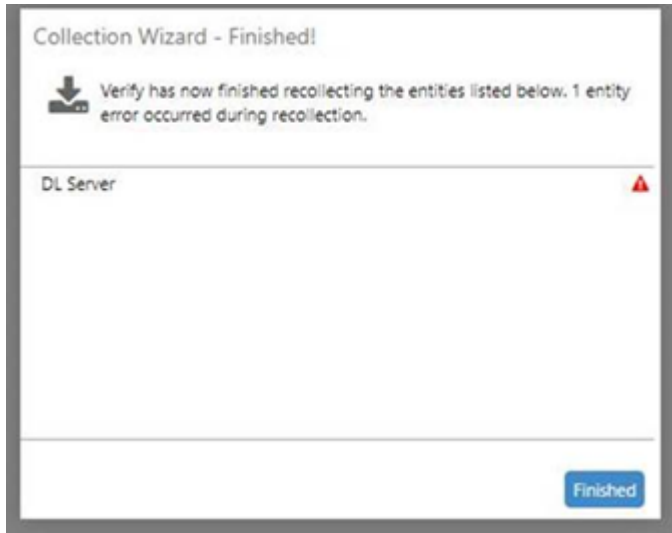

If an error occurred, an error icon will appear to the right of the entity. Hover the mouse pointer over the error icon to see the message in a tooltip.

c.   Click **Finished**.

Collecting Entities in a Tab

To collect entities in a particular tab, enter Input Mode and do the following:

1.   Right-click on the tab's header. If you have the permissions to perform a collection on that particular tab, a **Collect** option will be available in the shortcut menu.
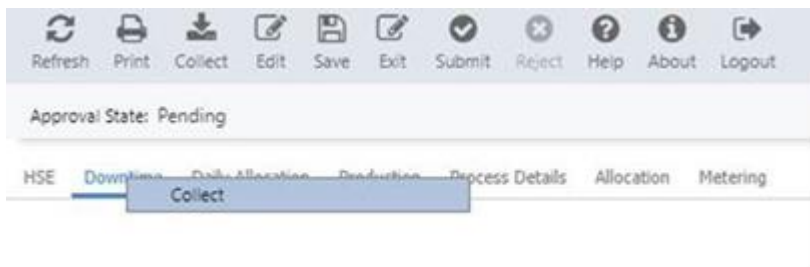
Click the **Collect** option to open the Collection Wizard.

2.   The **Select Entities to Collect** dialog box lists all entities configured with a Collector in the selected tab. If an entity has a collection error from a previous collection, an error icon will

appear to the right of the entity. Hovering the mouse pointer over the error icon will display the error message in a tooltip.

a. Select the entities you want to collect values from by selecting the check box in front of the entity, or select the **(Select All)** check box if you want to select all the entities.

b. Click **Next**.

A confirmation message appears.

If there are any changes to the report that have not yet been saved, you now have the chance to save them before recollecting. If you do not save the report, any changes you have made since the last time you saved will be lost.

Note: Regardless of whether you save changes or not, any values inside the selected entities will be overwritten with new values from the Datasource.

3. In the confirmation message:

a. Click **Save** or **Don't save**, as appropriate.

b. Click **OK** to commence recollection.

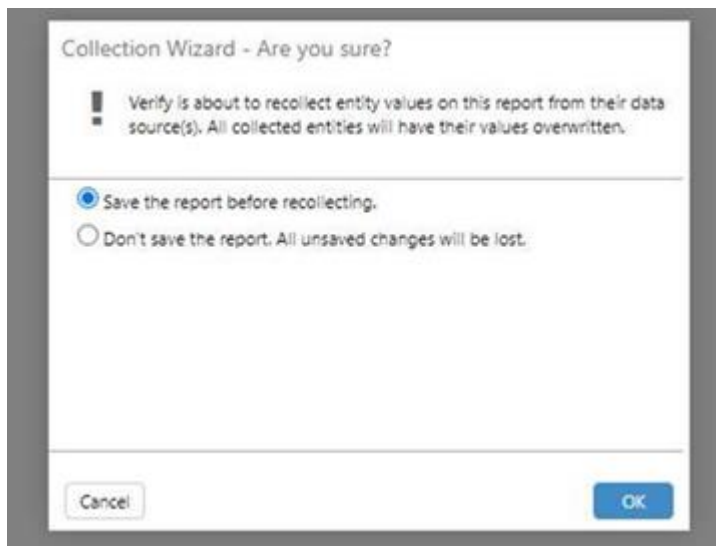When collection has finished, all the entities that were collected are listed, along with any errors that reoccurred.
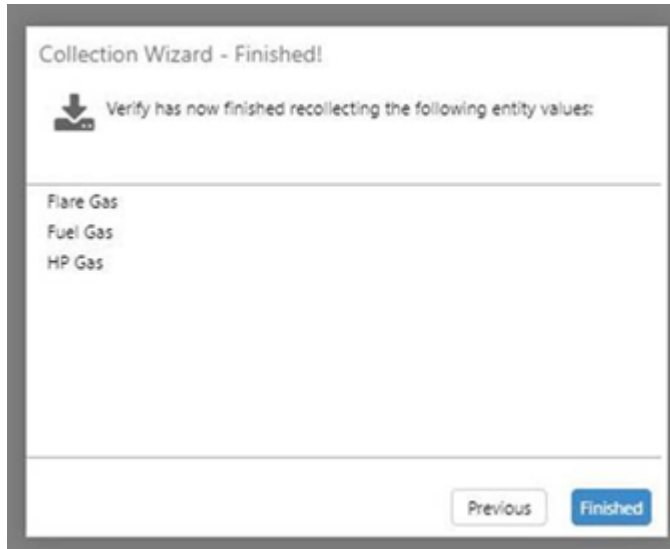
If an error occurred, hover the pointer over the error icon to see the message in a tooltip.

c.   Click **Finished**.

Collection Errors

Sometimes the data collection process may encounter problems fetching the report data for one or more entities in a report. When you access this report in Input Mode, the Collect button may display an error notification, as follows:

 Collect button is available (user has the Recollect security privilege) and the report has one or more collection errors.

 Collect button is unavailable (user does not have the Recollect security privilege) and the report has one or more collection errors.

 Collect button is available and the report has no collection errors.

 Collect button is unavailable and the report has no collection errors.

Entities in the current report that failed to be collected from their Datasource will be surrounded by a red border.

▸   To rectify any errors (see page 36), you will probably need to attempt a Recollection by clicking the **Collect** button on the toolbar.

Submitting a Report for Validation

Values are not submitted until the validation process is complete.

Note: The submission process will fail if any of the tabs on the report are locked by another user.

To submit a report for data validation:

1. Make sure you are in **Input** Mode.

2. Click the **Submit** button on the toolbar.

    P2 Verify will validate all of the fields to make sure they are within range and entered as required.

    If all data is valid, a confirmation message appears, asking you to confirm the submission.

3. Click **OK** to confirm.

Validation Errors

If any invalid or out of range data exists, validation stops and you are prompted to immediately correct the errors.

For example, if a required field is empty, an empty field message appears.

When an error is encountered, the dialog box displays the error and prompts you to correct it. To correct an error discovered during the validation process:

1. In the **Error Validating** dialog box, click **OK.**

    You are immediately taken to the field containing the error.

2. Modify the value in this cell to an acceptable one. If the new value is out of range, you should change, ignore, or accept it as appropriate.

3. Click the **Submit** button again to restart the validation process.

After validation has finished, the report is marked as *submitted*.

Submit Errors

If any entities failed to submit to the data sources configured, an error message appears. The message displays a list of all the entities in the current report that failed to be submitted to their data source.
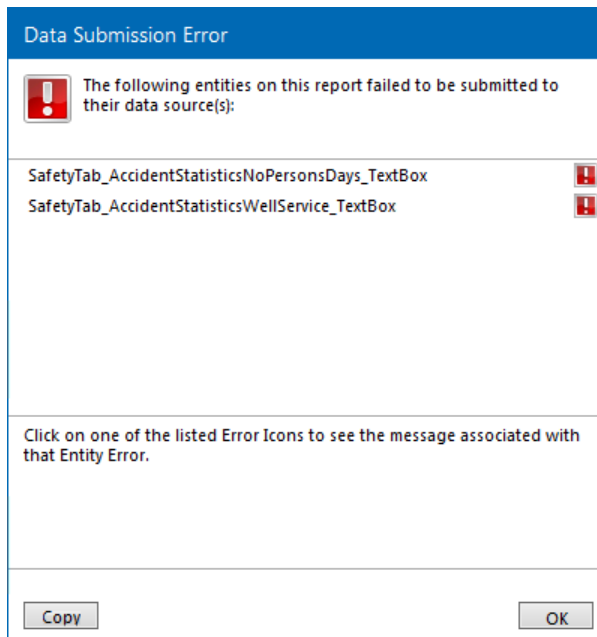
Usually this means that the report values have not been sent to other systems, but the latest values have been saved in the Verify database.

Additionally, each affected entity is surrounded by a red border on the Verify page.

▶   To get a brief description of the problem, hover the mouse pointer over the red error icon.

▶   To see the error message, click the error icon. The message appears in the lower pane of the dialog box.

When you get a submit error, there are two options available.

Option 1:

1.   Click the **Submit** button on the Verify toolbar to attempt the submission process again.

2.   If the process still fails, contact your System Administrator with details about the entity name and the error message.

Option 2:

1.   Click the **Copy** button to copy the details about the entities that failed to submit into your computer's clipboard.

2.   From there, they can be pasted into an email or other notification for your System Administrator.

Rejecting a Report

If you have received a report and it is incorrect, you can reject it and send it back for editing at the previous stage. The report must then be resubmitted for validation.

To reject a report:

1.   Make sure you are in **Input Mode**.

2.   Click the **Reject** button on the toolbar.

      A confirmation prompt appears, asking you to confirm the rejection.

3.   Click **OK** to confirm.

Viewing an Old Report

Reports are retained indefinitely in the Verify database. Viewing an old report is a simple matter of using the date picker to change the production period on the interface. You can view historical reports in both Read-Only and Input modes.

▸   To change the production period, click the left and right arrows to move the production period backwards or forwards.

▸   Clicking the text in the middle of the production period picker displays a calendar, which allows you to display the production period for a specified date and time.
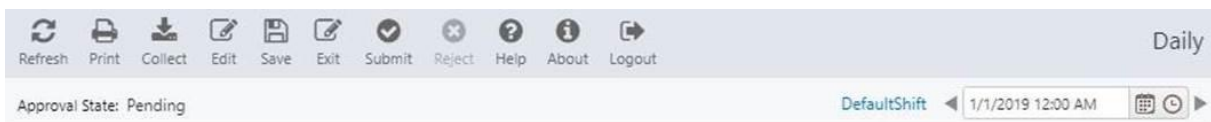
After you have changed the production period, the currently selected report is immediately refreshed using the selected production period.

Note: The production periods are configured by the System Administrator.

Viewing Previous Values

In Read-Only Mode or Input Mode, you can view the values and associated timestamps that were previously saved or submitted for the last 10 production periods, for a selected entity.

To view the last 10 previously saved or submitted values and their timestamps:

1.   Ensure you are in Read-Only Mode or Input Mode.

2.   Right-click the entity, and then select **Previous Values** from the shortcut menu.

The values and timestamps appear below the Previous Values menu item, sorted in descending order (i.e. most recent value at the top). After the values have been retrieved, they are cached on the client and the values will appear instantaneously the next time.

If the entity does not have a value for a particular day (e.g. if the data area was not saved or submitted for that day), the value for that day will be skipped, and the value from an earlier day will be retrieved instead (to constitute 10 values).

Note: This functionality only applies to standard text boxes, calculation text boxes, and date/time fields that are not embedded within a dynamic list. If you right-click an entity within a dynamic list, the message *Not available* appears.

Using the Comments List

Note: The Comments List entity only submits to the Production Reporting System database. It should not be used where the Production Reporting System has not been installed.

Note: This control was deprecated in version 1.16. New customers should avoid using this control.

The Comments List is a pre-formatted object that allows users to make comments on any aspect of the data in P2 Verify or the layout of P2 Verify. The object is designed to be placed on its own tab.

As operators enter their comments, the entries are automatically added to the list, with the earliest comment at the top. The Comment Type combo box is populated from the Production Reporting System and cannot be changed.

You can use the Comments List entity to keep a running operator's log of anything that has happened during the production day. If you have **P2 Shift Log** installed on-site, this can also be integrated with P2 Verify.

However, the Comments List entity is also useful for auditing purposes. As validation progresses through the chain of command, you may want to let the next person in the chain know, for example, why you made a particular change or why a particular data value has been ignored. You can use the Comments tab to document any comments.

Adding a Comment

1.   While in Input Mode, in the **Comments** dialog box, click the **Comment Type** from the drop-down list.

2.   Select a time using the date/time picker in the **Comment Time**. This is used as the timestamp of the comment.

3.   Type your comment into the **Comment** text box.

4.   Click **Add Comment**.

The new comment appears in the comments list with your user name, the date, and the time you have selected.

Editing a Comment

1.   While in Input Mode, in the **Comments List**, click the **Edit** button next to the comment you want to edit.

2.   The comment you are editing appears in the **Edit Comment** group box.

           You can:

           –   Change the **Comment Type**.
           –   Change the comment text.
           –   Change the **Comment Time.**

3.   Click **Submit Comment** when you are finished.

The edited comment appears in the comments list with your user name, the date, and the time you have selected.

Deleting a Comment

1.   While in Input Mode, in the **Comments List**, click the **Remove** button next to the comment you want to delete.

2.   At the confirmation message, click **OK**.

The comment is removed from the comments list.

Audit Log

If enabled, the Audit Log uses the Auditing Web Viewer to allow users to see when the values of items have been changed, who changed them, and at what time, for the selected report.

Note: Some installations may not have this feature enabled.

The Audit Log button is only available in Read-Only Mode. A brief introduction to the Auditing Web Viewer is provided below. For more information on Auditing, refer to *P2 Auditing Web Viewer User's Guide*.

▸   To open the Audit Log, click the **Audit Log** button on the Verify toolbar.

The Auditing Web Viewer displays two panes:

•   A **Tree View** pane on the left, which lists the areas, reports, and tabs in a hierarchical structure.

•   An **Events and Properties** pane on the right, which displays detailed information on the changed values for an item selected in the Tree View. This pane is further divided in two:

           –   **Master List**: Displays a summary of the item selected from the Tree View.

– **Details List**: Displays further details regarding the row that is selected from the Master List.

Use the **Mode Selection** buttons in the blue **Events and Properties** header to change the views that are displayed in the Master List and Details List panes.

The three modes are: Events, Properties, and Summary. The default mode is Events.

Note: If there are no events listed in the Master List, or you get a message such as *No records to display*, you may need to set the Start Time in the web viewer toolbar to an earlier date.

In the example above, the **Production Summary** tab from the Production area is selected in the Tree View on the left.

The pane on the right displays all the events that occurred for the selected tab. Possible events at the report and tab levels include *Report saved* and *Report submitted*.

Clicking a row (Internet Explorer an event) in the Master List will list the entities that were modified during that event, in the Details List below.

Dynamic lists are listed separately in the Tree View under the tabs that they are in.

▸ Expand a selected dynamic list in Tree View, and click a row ID to view the audit details for each row that was added to that dynamic list:
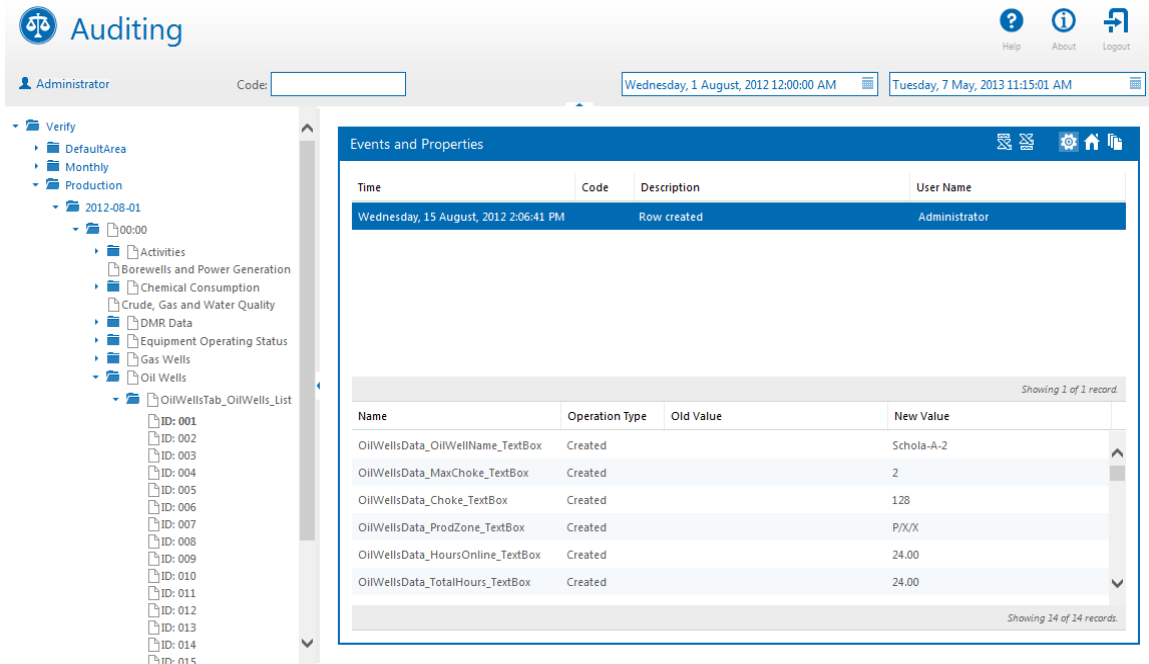
In the example above, clicking row *ID 001* in Tree View will list all the events that happened for the first row of the dynamic list in the Master List pane. Possible events at the dynamic list row level include *Row created*, *Row updated*, and *Row deleted*. Clicking an event in the Master List will list only the columns that were modified during that event in the Details List.

Comments lists are similarly listed in the Tree View under the tabs that they are in. Navigation and presentation of the audit data is similar to that for dynamic lists.

Trends

The P2 Explorer trend allows you to view multiple entities simultaneously over a specified time period.

▸ In Read-Only Mode and Input Mode, you can send any entity to the P2 Explorer by right-clicking on it and selecting **Trend**.

For information on how to use the trend, refer to the P2 Explorer trend documentation.

Printing a Page

The print function in P2 Verify allows you to print the selected tab without the header.
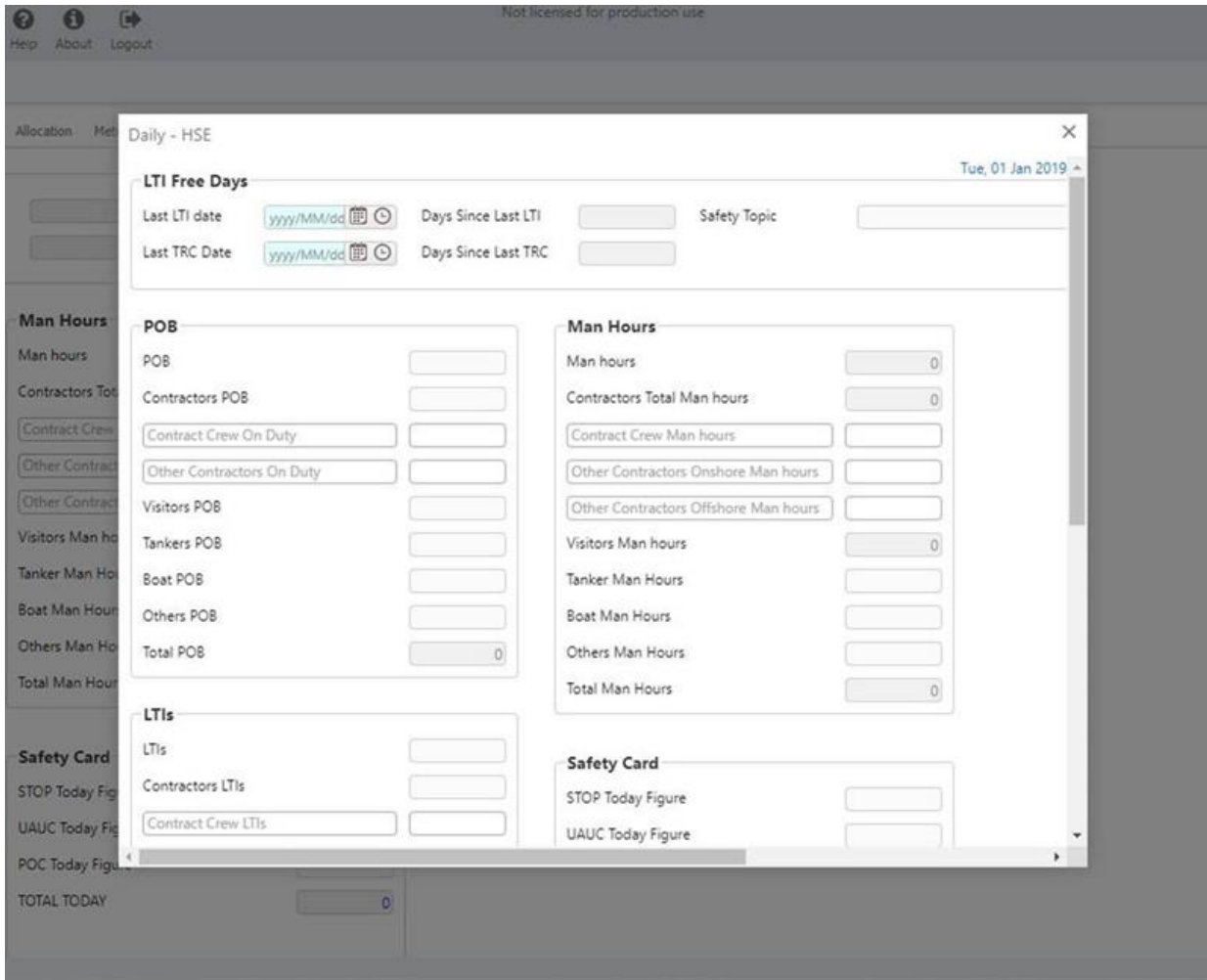
When you click the Print icon on the Verify toolbar, a print preview screen opens, along with the standard Print dialog.

P2 Verify prints at its best when the page orientation is landscape.

To print a page:

1.   Click the **Print** button on the Verify toolbar.

      The **Print** dialog box appears.

2.   In the **Print** dialog box:

      a.   Click **Preferences**, and select **Landscape**.

      b.   Select your printer, and then click **Print**.

Appendix A. Date/Time Format Strings

The **VFYDateTime** entity can be customised to use a custom Date/Time format string. This can be done by creating a custom format string using a combination of any of the following format strings to represent each of the Date/Time parts:

d

Represents the day of the month as a number from 1 through 31. A single-digit day is formatted without a leading zero.

dd

Represents the day of the month as a number from 01 through 31. A single-digit day is formatted with a leading zero.

h

Represents the hour as a number from 1 through 12, that is, the hour as represented by a 12-hour clock that counts the whole hours since midnight or noon. Consequently, a particular hour after midnight is indistinguishable from the same hour after noon. The hour is not rounded, and a single-digit hour is formatted without a leading zero.

hh

Represents the hour as a number from 01 through 12, that is, the hour as represented by a 12-hour clock that counts the whole hours since midnight or noon. Consequently, a particular hour after midnight is indistinguishable from the same hour after noon. The hour is not rounded, and a single-digit hour is formatted with a leading zero.

H

Represents the hour as a number from 0 through 23, that is, the hour as represented by a zero-based 24-hour clock that counts the hours since midnight. A single-digit hour is formatted without a leading zero.

HH

Represents the hour as a number from 00 through 23, that is, the hour as represented by a zero-based 24-hour clock that counts the hours since midnight. A single-digit hour is formatted with a leading zero.

m

Represents the minute as a number from 0 through 59. The minute represents whole minutes passed since the last hour. A single-digit minute is formatted without a leading zero.

mm

Represents the minute as a number from 00 through 59. The minute represents whole minutes passed since the last hour. A single-digit minute is formatted with a leading zero.

M

Represents the month as a number from 1 through 12. A single-digit month is formatted without a leading zero.

MM

Represents the month as a number from 01 through 12. A single-digit month is formatted with a leading zero.

MMM

Represents the abbreviated name of the month.

MMMM

Represents the full name of the month.

s

Represents the seconds as a number from 0 through 59. The second represents whole seconds passed since the last minute. A single-digit second is formatted without a leading zero.

ss

Represents the seconds as a number from 00 through 59. The second represents whole seconds passed since the last minute. A single-digit second is formatted with a leading zero.

t

Represents the first character of the A.M./P.M. designator.

tt

Represents the A.M./P.M. designator.

yyyy

Represents the year as a four-digit number.