

# OEE Alert Release Note

## **Version 3.5**

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Marketed By: Vetii | GROUP – [www.vetiigroup.com](http://www.vetiigroup.com)

# What's New in 3.5 - Enhancements

## Enhancements:

- **Asset Filtering** - New and Improved Criteria Selection for Categories, Groups and Queries
- **Security** - Set **Administrator access** for changing Production State, Alert Rules, Preferences and Email Server
- **Big Screen TV** – a new URL has been created to allow Big Screen TVs to access the same OEE Alert pages without Window Authentication.
- **Global configuration** settings are managed through a separate user interface – OEE Setup
- **Production State View** – Clicking an event or interval now allows adding comments (or changing reasons) directly within the Production State View.
  - Those with administrator rights can also **change the production state**.
  - Ability to enter **Labor Hours** for each shift.
- **Hour-by-hour view** – You can now optionally display **two metrics** per line (i.e. goal count and current good count) and a **roll-up** option is provided, which gives a summary of how well the selected group is doing.
  - View data for the last 4 hours
- **Top Losses view** – In addition to showing down (and optionally setup and / or standby) events in a Pareto view, you can also reflect **speed loss** and how it rates relative to other production loss causes. It also is able to reflect reason grouping or categorization.
- **Display View** – In addition to showing fixed size scoreboard views in a grid, a **free form mode** is supported which allows user controlled placement and size.
- **Actions – Set Comment** – Filter the display to show only NONE downtime reasons
- **Preferences** can now be specified for specific asset groupings, not just a single global setting.
- **OEE Mode** – selects how OEE and its components are being calculated.
- **KPI View** - group assets into a hierarchy by selected properties and view OEE, Availability, Performance and Quality.
- **New alert types:**
  - **Job Start Performance**, alert if 1st hour of job has an OEE below the threshold.
  - **Shift Start Performance**, alert if 1st hour of shift has an OEE below the threshold.
  - **Reason Marker**, alert if marker event is present and has not been reported yet. It does no longer have to be active at the time of checking, just not yet reported

# Selection Criteria for Assets

## VISUALIZING DATA HOME PAGE

Home

Views

Actions

Setup

Info

Active filters: Date range: [Today](#), Date: [Today](#), Category: [Enterprise:VetiiGROUP MFG](#)

Select criteria for assets

Categories

Groups

Queries

### Area

- Expansion
- Original
- Prod 1
- Prod 2
- Prod 3
- Prod 4

### Enterprise

- VetiiGROUP MFG

### FocusedFactory

- Mists
- Prestige
- Sanitizers
- Soaps

### Location

- Monroe
- Monticello

### Plant

- N4899
- N5000

Select criteria for assets

Categories

Groups

Queries

- ALB1-Expansion
- ALB1-Original
- Columbus
- Debbie
- Line 11
- Lynchburg
- Lynchburg
- one

Select criteria for assets

Categories

Groups

Queries

- Soaps

Apply

Clicking on the link next to the **Category:** will bring up a combined dialog box letting you select the criteria for your displays.

You can switch between the tabs – **Categories**, **Groups** or **Queries** for your selections.

# Security

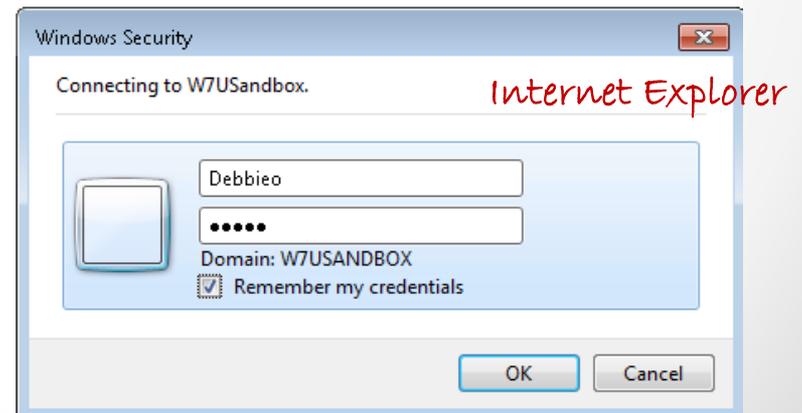
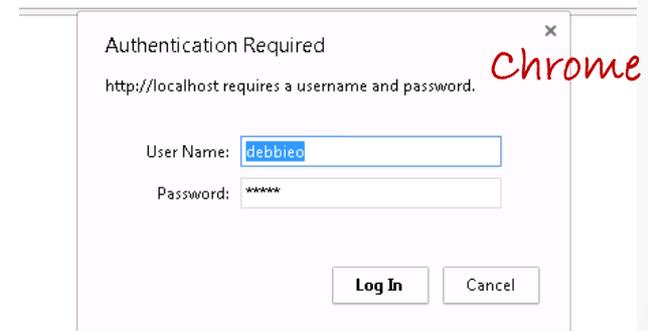
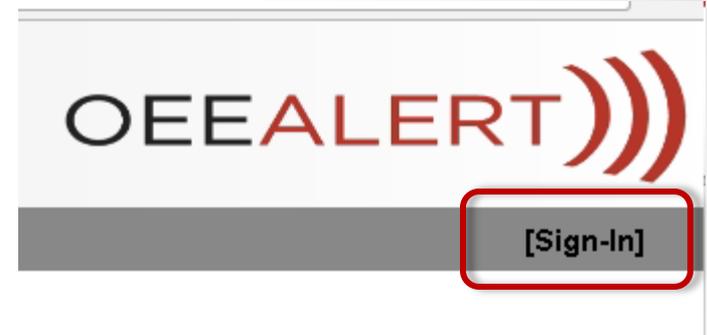
Security serves two functions:

- **Authentication**, providing the name of the currently logged in user
- **Authorization**, through roles, to control access to pages and features
- Many of the screens through which settings are updated have been moved to a separate portal, [server name]/**OEESetup**, which uses Windows Authentication to validate the users and look up the user's configured roles.
- **Windows Authentication** is an option configured in the web server to allow a browser to share the identity of the user using the browser. As the name suggests, it relies on Windows, capturing the user that is logged on to Windows.
- The major reason OEEAlert needs the name is for auditing: tracking which user updated a comment of a reason. In cases where we just use the visualization features of OEEAlert, like on big screen TVs, we would prefer to run in anonymous mode, disabling Windows Authentication.
- For this reason, the installation programs creates two URLs to access OEEAlert:
  - [server name]/**OEEAlert**, which uses Windows Authentication
  - [server name]/**OEEAlertTv**, which uses Anonymous mode. In this URL, the ability to set comments and update reasons is disabled

Contact Deb-Tech Systems, Inc. for the OEE Setup Administrators Guide

# Windows Authentication

- When you first launch OEE Alert, you will be prompted for your windows User Name and Password. This is the same login that you use to log into your computer.
- If Windows Authentication is **not** enabled, then you will need to sign in to OEE Alert to be able to change reason codes or add comments.



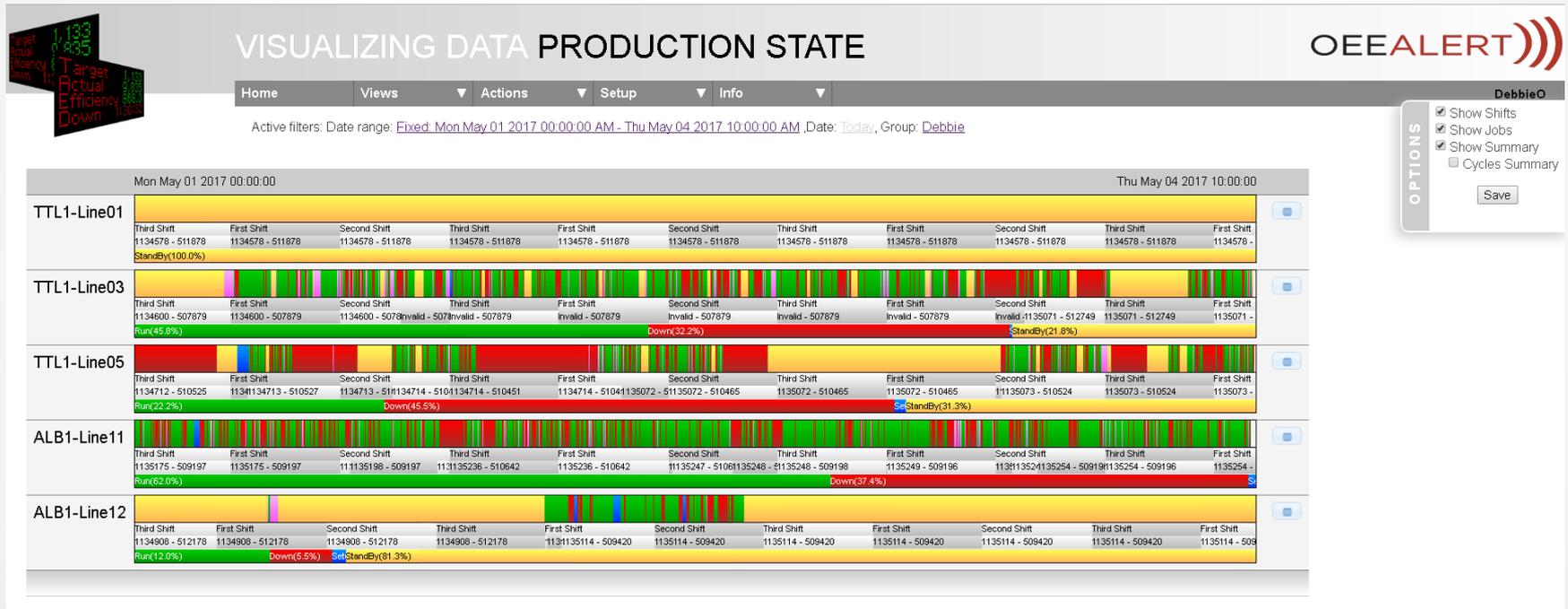
# Production State

The **Production State** view has been changed and enhanced in the following ways:

- Clicking an event allows **changing the reason** right in this view and to add a comment as well. If you have an administrator role, you can also **change the production state** of an event. Note that to do so, you must be logged in with administrator role.
- Clicking an interval (Shift or Job) allows entering a comment for the interval right in this view. You can also enter Labor Hours.
- Clicking on the asset label allows clicking through to the Vorne Interface. Previously you would click the event timeline.
- The Vorne scoreboard display is now larger and displayed on the left. It can be enlarged by dragging the green border on the right. (See section on Display View for more information)

# Production State - Events

From this view you can click on any event and it will display the Set Reason and Comment dialog box.



When clicking on an event, it brings up a dialog similar to the Set Comment page.

# Set Reason and Comment - Events

Asset or Vorne Device

Forward/Backward Buttons

Reason

Add your comments here.

Event	ID:	126458	Start time:	Tue, May-02, 2017 19:01:51 []
	State:	Down	Reason:	2100 Conveyor
Comment	Belt slipping - part ordered			

Apply

Next to the event ID are forward and backward buttons: sometimes an event is short and may not even be rendered due to its (lack of) size. These buttons allow for walking back and forth over actual events, not just the displayed ones, 5 in either direction.

# Set Reason and Comment – Change Production State

The screenshot shows a web-based interface for managing production events. The title bar reads "Set Reason and Comment - TTL1-Line05". The main form contains the following fields and controls:

- Event ID:** 126458
- State:** A dropdown menu with options: Run, Down (highlighted), Setup, StandBy, Offline.
- Reason:** 2100 Conveyor
- Comment:** Belt slipping - pa
- Start time:** Tue, May-02, 2017 19:01:51

Handwritten red annotations include:

- "Asset or Vorne Device" pointing to the ID field.
- "Forward/Backward Buttons" pointing to the navigation arrows between the ID and Start time fields.
- "Reason" pointing to the Reason dropdown menu.

An "Apply" button is located at the bottom right of the form.

When logged in with Administrator credentials, you can also change the production state of the event.

# Set Reason and Comment – Change Production State

Once the event is changed, the Production State view will change to the color associated with that state.

Set Reason and Comment - TTL1-Line05

Event ID: 126458 Start time: Tue, May-02, 2017 19:01:51

State: Setup Reason: Select Reason

Comment

Setup  
Changeover

Apply

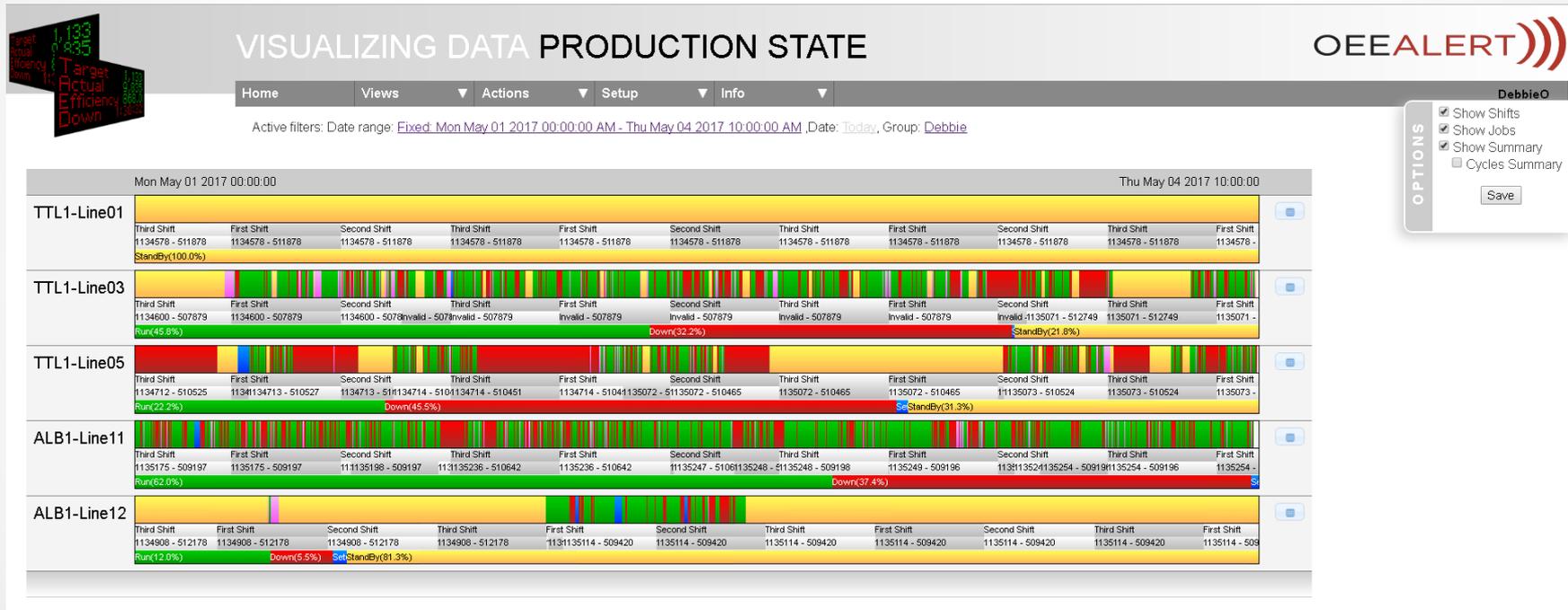
*Changed to new Production State*

*New Reason*

Changing production state causes the OEE calculations to change and all related values must be recalculated. We cannot change the state in the Vorne, but if we are changing the state of the current event, we can split the event so the requested state is present going forward. **But it is important to recognize that the Vorne and OEEAlert will now have different data and as a result, different OEE values.**

# Production State - Intervals

From this view you can click on either a **Shift** or **Job** Interval and it will display the Set Reason and Comment dialog box.



When clicking on an interval, it brings up a dialog similar to the Set Comment page.

# Set Comment - Intervals

*Asset or Vorne Device*

*Shift or Job*

Set Comment - TTL1-Line05

Interval	ID:	Second Shift	Start time:	Tue, May-02, 2017 15:00:00 []
----------	-----	--------------	-------------	-------------------------------

Comment

Continue to have conveyor  
Need to get maintenance of

Set Comment - TTL1-Line05

Interval	ID:	1135072	Start time:	Tue, May-02, 2017 14:59:59 []
----------	-----	---------	-------------	-------------------------------

Comment

Had a lot of issues running this job.

*Add your comments here.*

Apply

By clicking a shift or job, you can enter or edit comments for that interval.

# Enter Labor Hours – Shift Interval

Asset or Vorne Device

Shift or Job

Set Comment - AL41

Interval ID: Day Shift Start time: Wed, Nov-29, 2017 05:00:00

Labor Hours: 8

Comment Labor hours on Shift

Set Comment - AL42

Interval ID: R000502501041 Start time: Wed, Nov-29, 2017 05:00:00

Labor Hours: 5

Comment Labor hours on Job.....

Add your comments here.

By clicking a shift or job, you can enter or edit Labor Hours for that interval.

# Getting to your Vorne XL

## Vorne Scoreboard view

Clicking the button to the right of the production state timeline will temporarily display the scoreboard display for that line:



## Click through to Vorne

Click on the Asset label on the left:



This will then take you to the Vorne Analyze page, similar to previous versions of *OEEAlert*:

# Comment Summary

VISUALIZING DATA PRODU

Home Views **Actions** Setup

Active filters: Date range: [Fixed: Mon May 01 2017 00:00:00 AM - Thu May 04 2017 10:00:00 AM](#)

00:00:00

- Set Comment
- View Comments
- Alerts Sent

VISUALIZING DATA COMMENT SUMMARY OEEALERT

Home Views Actions Setup Info DebbieO

Active filters: Date range: [Fixed: Mon May 01 2017 00:00:00 AM - Thu May 04 2017 10:00:00 AM](#), Date: [Today](#), Group: [Debbie](#)

Show Audit Info

TTL1-Line05						
Time Stamp	Item Start Time	Type	Duration	Info	User	Change
Sat May 06 2017 18:04:00	Tue May 02 2017 15:00:00	shift		Second Shift	W7USandbox\DebbieO	Comment: -> Continue to have conveyor belt issues. Need to get maintenance out here to also work on labeler.
Sat May 06 2017 18:00:31	Tue May 02 2017 15:11:35	event	0:00:33	2100 Conveyor	W7USandbox\DebbieO	ReasonText: None -> 2100 Conveyor
Sat May 06 2017 18:22:58	Tue May 02 2017 19:01:51	event	3:16:01	Setup	W7USandbox\DebbieO	State: down_enum -> setup_enum ReasonText: 2100 Conveyor -> Setup Comment: Belt slipping - part ordered. -> Changed from Down to Setup.
Sat May 06 2017 15:57:37	Tue May 02 2017 19:01:51	event	3:16:01	Setup	W7USandbox\DebbieO	Comment: -> Belt slipping - part ordered.

Show Audit Info

**Change**

k Comment: -> Labor hours on Shift  
k Labor Hours: 0 -> 8

**Change**

k Comment: -> Labor hours on Job.....  
k Labor Hours: 0 -> 5

All of the changes are available for viewing (and reporting in OEE Studio).

# Hour-by-Hour

The Hour-by-Hour view has the following modified features:

- Optionally display a second metric bar
- A roll-up feature at the top can display how well the group of lines is doing in the aggregate
- The scoreboard display has been moved to the left, has been made larger and can be resized
- The Asset label provides a click through to the Vorne Analyze page
- Ability to view the Last 4 Hours

# Two Sets of Metrics

## Single Value Display

Check the box and select the values

**OPTIONS**

Show Shifts

Show Jobs

Show Roll-up

Summary value  x2

OEE

Availability

Performance

Quality

Good Count

Line speed

Goal delta

Target count

Show Graph

OEE

Good, Reject

Run, Down

Cycles

Cycles time

**OPTIONS**

Show Shifts

Show Jobs

Show Roll-up

Summary value  x2

OEE

Availability

Performance

Quality

Good Count

Line speed

Goal delta

Target count

Show Graph

OEE

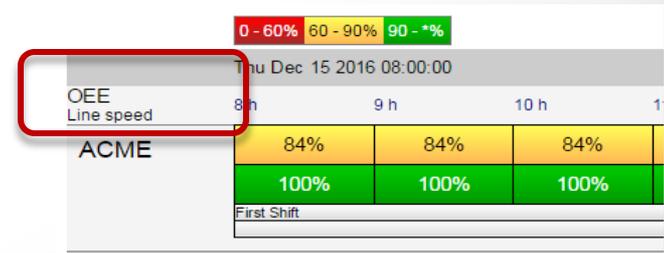
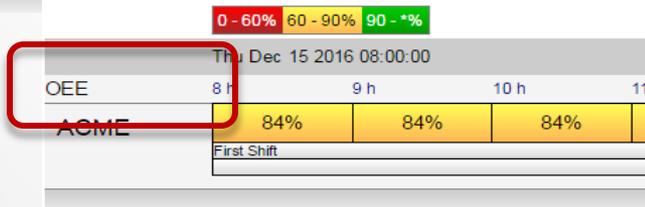
Good, Reject

Run, Down

Cycles

Cycles time

- Checking the 'x2' checkbox will open up a second row of radio buttons, to select the second metric to display.
- This will result in two bars with hourly blocks, the top one the first metric, the bottom one the second.
- The legend displaying which metrics are currently displayed is in the top left corner, above the asset names.
- The second metric is the one with the smaller font (Line speed, in the example)



# Hour-By-Hour ~ Roll-Up

**OPTIONS**

- Show Shifts
- Show Jobs
- Show Roll-up

Summary value  x2

- OEE
- Availability
- Performance
- Quality
- Good Count
- Line speed
- Goal delta
- Target count

Show Graph

- OEE
- Good, Reject
- Run, Down
- Cycles
- Cycles time

When displaying a group of lines, it is sometimes desirable to get feedback on how well the lines are doing as a group.

This is what the roll-up option offers. The graph part does not make sense for the roll-up, but a roll-up hourly display can be provided.

	8 h	9 h	10 h	11 h
0 - 60% 60 - 90% 90 - *%				
Thu Dec 15 2016 08:00:00				
Roll-up	163%	163%	163%	
OEE				
EST	188%	188%	188%	
	Day Shift			
ACME	84%	84%	84%	
	First Shift			

# Hour-By-Hour ~ Last 4 hours

Select a date

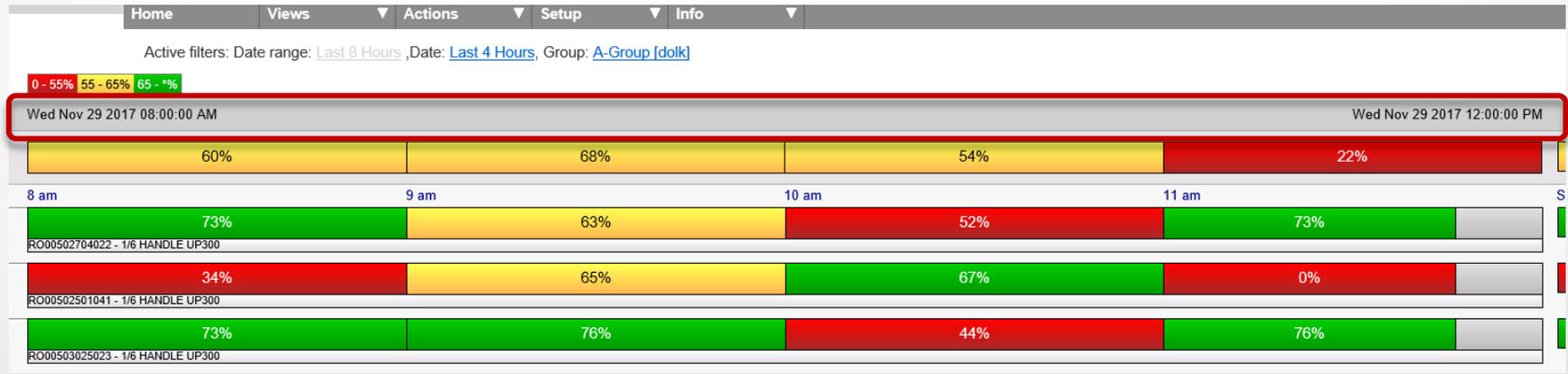
29 Nov, 2017

Today

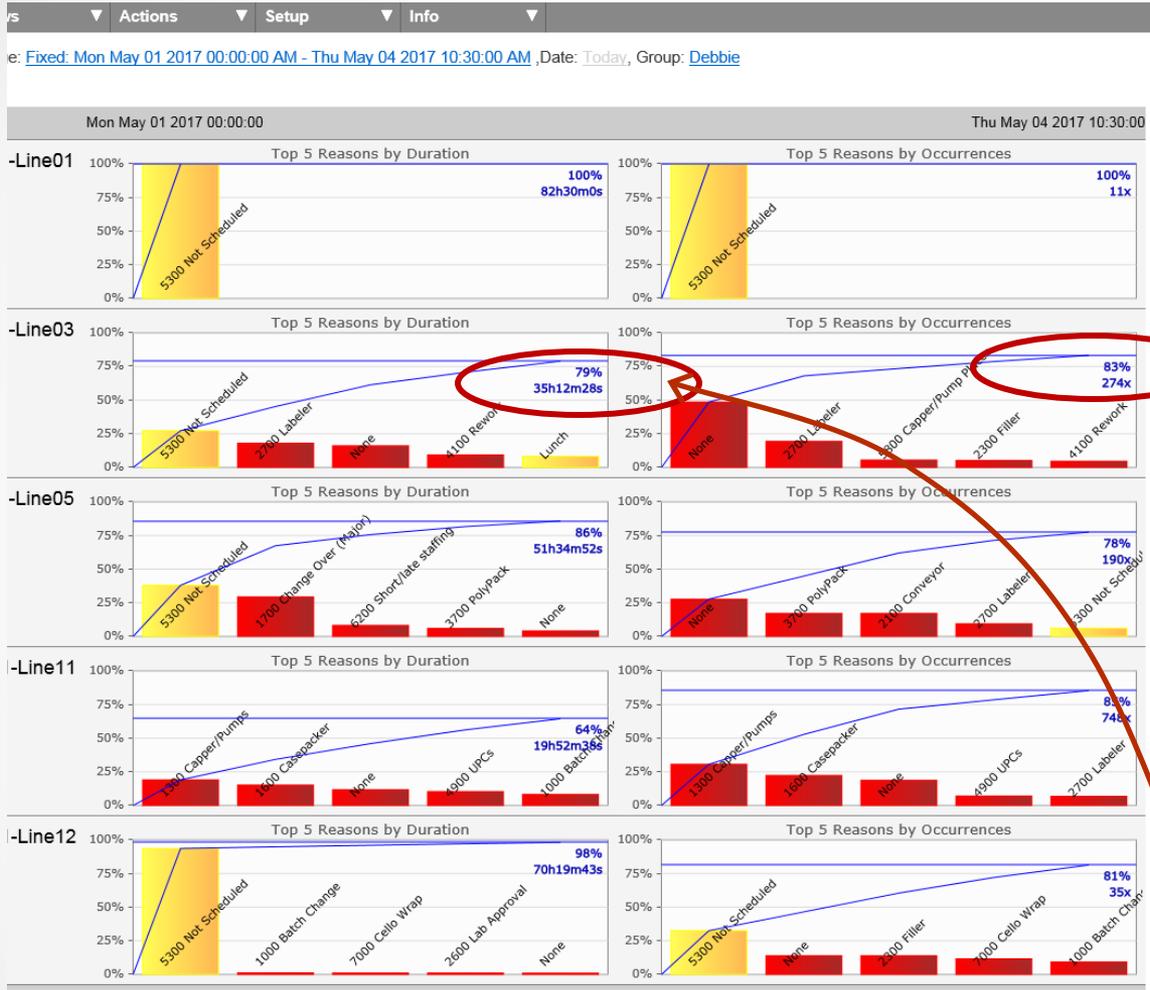
Today  
Last 4h  
Last 8h  
Last 12h  
Last 24h

Apply

You can select to view the Hour-By-Hour page for the last 4, 8, 12 or 24 hours.



# Top Losses



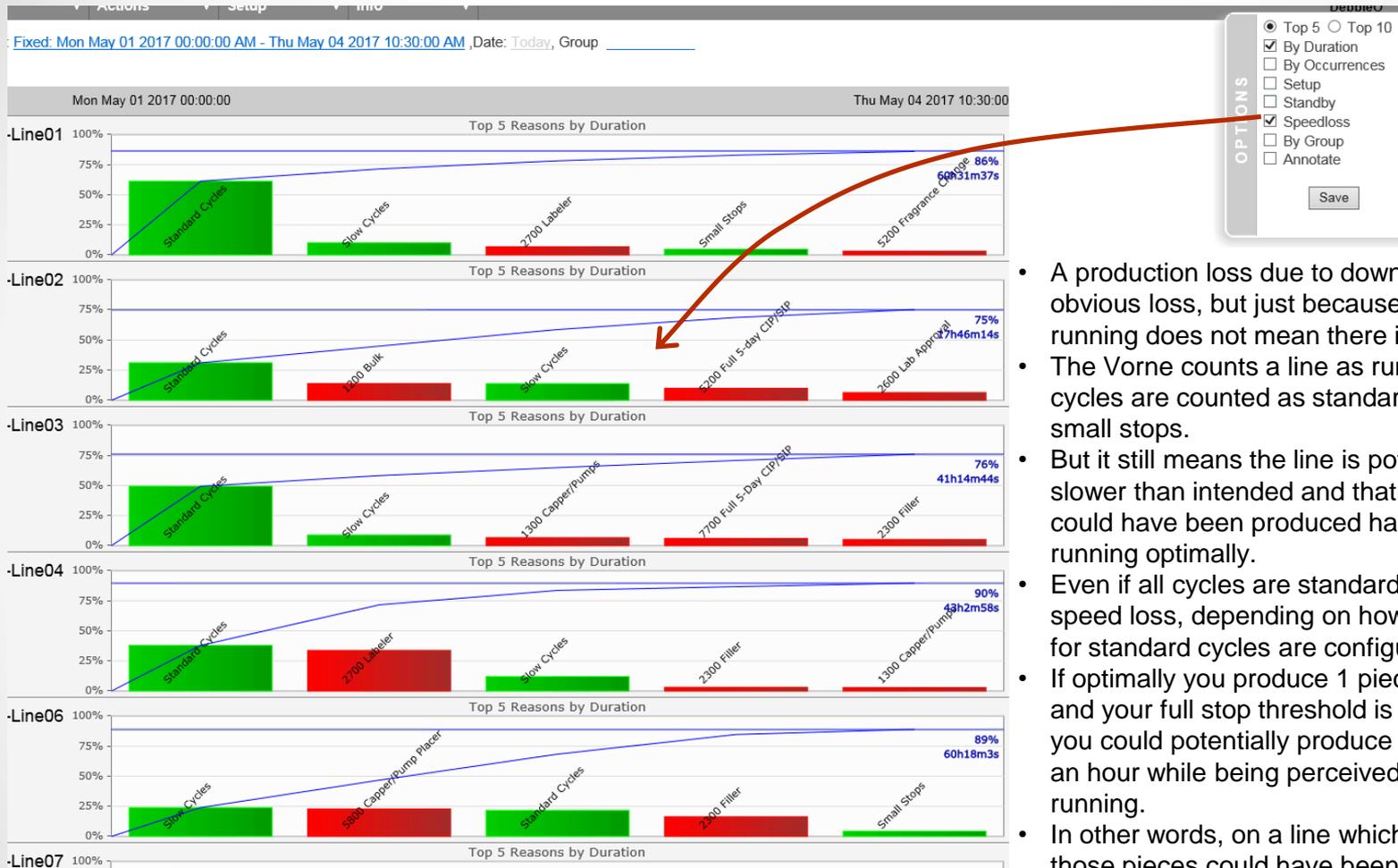
DebbieO

- Top 5  Top 10
- By Duration
- By Occurrences
- Setup
- Standby
- Speedloss
- By Group
- Annotate

Save

The display now includes the total hours and number of occurrences for the losses shown.

# Top Losses – Speed Loss

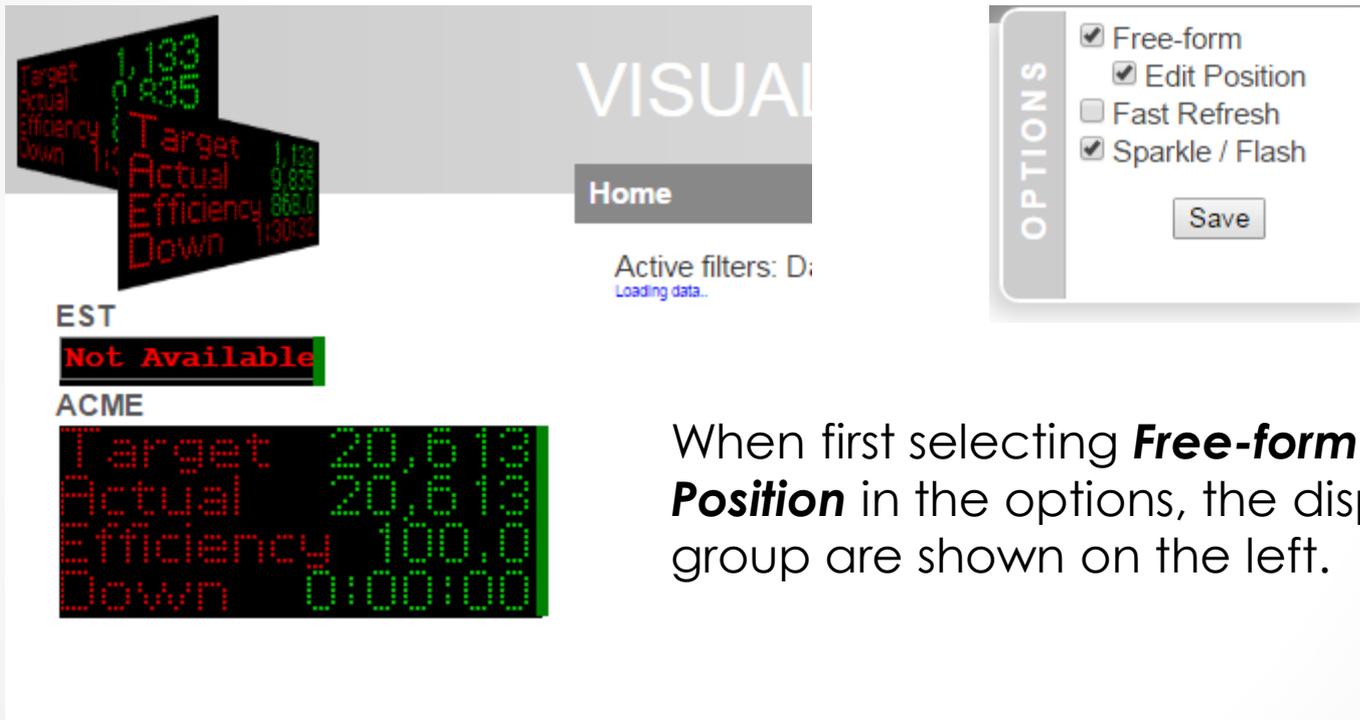


- A production loss due to down time is the most obvious loss, but just because the line is running does not mean there is no loss.
- The Vorne counts a line as running as long as cycles are counted as standard, slow or as small stops.
- But it still means the line is potentially running slower than intended and that more pieces could have been produced had the line been running optimally.
- Even if all cycles are standard there can be speed loss, depending on how the boundaries for standard cycles are configured.
- If optimally you produce 1 piece per second, and your full stop threshold is set to 2 seconds, you could potentially produce 1800 pieces in an hour while being perceived as constantly running.
- In other words, on a line which runs optimally, those pieces could have been produced in 30 minutes, so the remaining 30 minutes can be counted as a speed loss.

# Display View

The Display View displays the image of what is currently visible on the scoreboards.

The scoreboards can be viewed in a free form, resizable display.



When first selecting **Free-form** and **Edit Position** in the options, the displays in the group are shown on the left.

# Display View

By selecting the **Edit Position** option, you can drag the display around the screen by holding down the left mouse button while clicking inside the display and dragging it around.

Visualizing Data Display View

Home Views Actions Setup Info God

Active filters: Date range: Year-to-Date, Date: Thu, 15 Dec, 2016, Group: ACME\_EST

EST  
Not Available

ACME

Target	20.3
Actual	20.3
Efficiency	100.0
Down	0:00:00

OPTIONS

- Free-form
- Edit Position
- Fast Refresh
- Sparkle / Flash

Save

You can also resize the display by dragging on the green bar to the right of the display.

# Display View

- Selecting **Save** in the options will store the location and size for devices in this grouping in the database, to place them accordingly when returning to the page.
- **Note**: keep in mind this is an expensive page, in terms of network traffic (querying all devices every couple of seconds) and in terms of browser rendering. The page may appear unresponsive while rendering.

# Set Comments – Find NONE

The screenshot shows a software interface for managing event comments. At the top, there are fields for 'ID:' and 'Start time:'. A large text area labeled 'Comment' is present, with a 'save' button below it. To the right, there are two checkboxes: 'Include Event Timeline' (checked) and 'Include Audit Info' (unchecked). Below the comment form is a horizontal timeline visualization with colored bars representing different shifts: Third Shift (1134714 - 510451), First Shift (1134714 - 510451), Second Shift (1135072 - 510465), and Third Shift (1135072 - 510465). Below the timeline is an 'Event timeline' table with the following columns: Start Time, Duration, State, Reason Code, Reason Text, and Comment. The table contains 18 rows of data, all with 'State' set to 'Down' and 'Reason Text' set to 'None'. A checkbox labeled 'Unassigned reasons only' is checked in the top right corner of the table area.

Start Time	Duration	State	Reason Code	Reason Text	Comment
Tue May 02 2017 18:52:55	0:01:44.82	Down	0	None	
Tue May 02 2017 17:42:43	0:00:57.94	Down	0	None	
Tue May 02 2017 16:47:16	0:01:26.97	Down	0	None	
Tue May 02 2017 16:32:00	0:01:07.26	Down	0	None	
Tue May 02 2017 14:37:12	0:02:21.07	Down	0	None	
Tue May 02 2017 14:21:54	0:01:05.68	Down	0	None	
Tue May 02 2017 14:18:40	0:01:45.31	Down	0	None	
Tue May 02 2017 12:42:22	0:00:55.19	Down	0	None	
Tue May 02 2017 11:42:31	0:02:10.99	Down	0	None	
Tue May 02 2017 11:23:54	0:01:37.37	Down	0	None	
Tue May 02 2017 11:21:37	0:00:30.48	Down	0	None	
Tue May 02 2017 11:18:17	0:03:13.95	Down	0	None	
Tue May 02 2017 11:11:31	0:01:40.88	Down	0	None	
Tue May 02 2017 10:59:34	0:00:42.30	Down	0	None	
Tue May 02 2017 10:41:37	0:01:03.79	Down	0	None	
Tue May 02 2017 10:10:57	0:02:12.44	Down	0	None	
Tue May 02 2017 10:08:59	0:00:07.57	Down	0	None	

To find all of the '**None**' reasons, check the box next to 'Unassigned reasons only'. You can then easily go through the list and update to the correct reason.

# Preferences

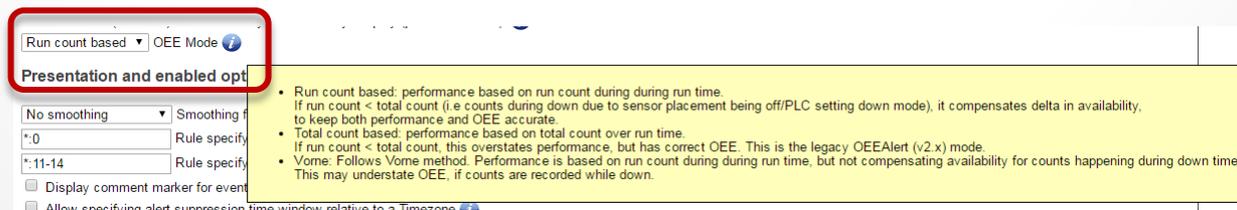
- The preferences page is present in **OEESetup**, and also in **OEEAlert**, as a read-only view to verify settings.
- If you login with admin credentials in **OEEAlert**, you can update preferences directly within **OEEAlert** (you may have to refresh the page after logging in).
- You now have the ability to have a separate set of preferences by asset grouping. There will be global settings that are optionally replaced by settings specified for a specific grouping. A grouping is a selected Category – Value pair, a group or a query.
- In **OEESetup** you explicitly pick a grouping in the preferences page. In **OEEAlert**, the settings are applied to the active asset criteria.
- To specify that you are applying settings to a group of assets is done by checking the **Scoped** check box. If not checked, you save global values.

Scoped 

If checked, settings apply to current asset selection only.  
To revert to global setting, select 'Clear Scoping' button.

# OEE Mode

- This selects how OEE and its components are being calculated.
- Vorne calculates performance based on cycle count during run time, which gives an accurate performance, but if (good) parts are counted outside of run time, it understates OEE. This can happen when a PLC forces a down state while there are still good pieces in the pipe line.
- *OEEAlert* uses Good/Total/Reject count as basis for its calculation and it may not be correct on performance during run time (as it includes counts during all production states, not just run time), but OEE will be correct.
- The run count based mode calculates the performance the way the Vorne does, but compensates availability for the good pieces that the Vorne did not consider, so both performance and OEE come out right in this case.



The screenshot shows a configuration interface for OEE Mode. A red box highlights a dropdown menu currently set to "Run count based" with a blue information icon to its right. Below the dropdown is a section titled "Presentation and enabled options" with several settings: "No smoothing" (dropdown), "Smoothing factor" (input field with "0"), "Rule specification" (input field with "11-14"), and two checkboxes: "Display comment marker for event" and "Allow specifying alert suppression time window relative to a Timezone". A yellow tooltip is open, providing details for the "Run count based" mode.

**Run count based** OEE Mode ⓘ

**Presentation and enabled options**

- Run count based: performance based on run count during during run time. If run count < total count (i.e counts during down due to sensor placement being off/PLC setting down mode), it compensates delta in availability, to keep both performance and OEE accurate.
- Total count based: performance based on total count over run time. If run count < total count, this overstates performance, but has correct OEE. This is the legacy OEEAlert (v2.x) mode.
- Vorne: Follows Vorne method. Performance is based on run count during during run time, but not compensating availability for counts happening during down time. This may understate OEE, if counts are recorded while down.

# KPI View

- This view provides OEE, Availability, Performance and Quality for the selected assets, while offering the ability to group the assets into a hierarchy by selected properties.
- Optionally, counts (good, reject, total) can be included as well.
- Aggregate KPIs are presented for each hierarchy layer.

## VISUALIZING DATA PERFORMANCE INDICATORS

Click on the Specify Grouping to create your KPI page.

Home Views Actions Setup Info

Active filters: Date range: [Today](#), Date: [Last 4 Hours](#), Category: [Enterprise:TEAM MFG](#)

Enterprise Plant

Specify Grouping

Active Jobs

OEE Availability Performance Quality Line Speed

Enterprise Plant

Enterprise Plant

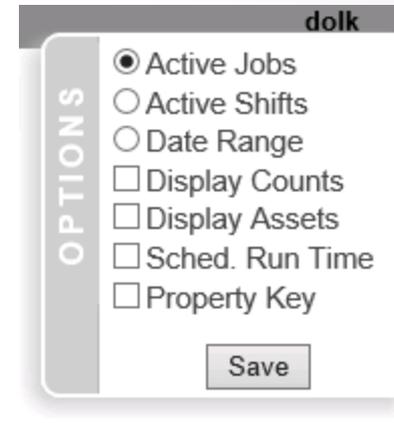
Specify Grouping

Active Jobs

	OEE	Availability	Performance	Quality	Line Speed
TEAM MFG	63.58%	63.69%	99.56%	100%	1.064
Alsip, IL	67.76%	67.14%	100.92%	100%	1.145
Marion, IL	73.27%	72.6%	100.92%	100%	1.23
Downers Grove, IL	49.69%	51.31%	96.85%	100%	0.817

# KPI View

**Display Options** – details for the options can be found in your OEE Alert ~ Info – Help - Views



filters: Date range: [Today](#), Date: [Last 4 Hours](#), Category: [Enterprise:TEAM MFG](#)

[Specify Grouping](#)

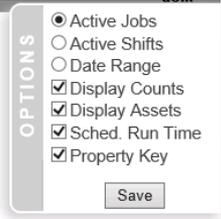
Drag from here to select...

Enterprise Plant

---

Enterprise Plant

... and drop here (and reverse)



## Active Jobs

	OEE	Availability	Performance	Quality	Line Speed	Good Count	Reject Count	Total Count	Scheduled Run-time	Current Event
Enterprise:TEAM MFG	63.81%	63.92%	99.56%	100%	1.068	291,300	0	287,949.072	23:25:47	
Plant:Alsip, IL	67.97%	67.35%	100.92%	100%	1.149	107,400	0	102,421.606	7:49:24	
AL41	67.97%	67.35%	100.92%	100%	1.149	107,400	0	102,421.606	7:49:24	Running
Plant:Marion, IL	73.46%	72.78%	100.93%	100%	1.233	108,900	0	110,432.988	7:48:20	
AL42	73.46%	72.78%	100.93%	100%	1.233	108,900	0	110,432.988	7:48:20	Running
Plant:Downers Grove, IL	49.99%	51.62%	96.83%	100%	0.822	75,000	0	75,094.478	7:48:03	
AL43	49.99%	51.62%	96.83%	100%	0.822	75,000	0	75,094.478	7:48:03	Running

# New Alert Types

- **Job Start Performance.** By default an alert is sent if at the 1h mark into a job, Performance is below the specified threshold. This can be customized to vary the minute mark and the monitored criteria. The full syntax for the threshold criteria is: [Value tracked:]Threshold@minutes, where the default value tracked is OEE and default minutes is 60. So specifying '0.8' is equivalent to P:0.8@60.
  - Supported Values tracked are:
    - O: OEE
    - A: Availability
    - Q: Quality
    - P: Performance
- **Shift Start Performance.** By default an alert is sent if at the 1h mark into a shift, OEE is below the specified threshold. Syntax is same as for Job Start Performance.
- **Reason Marker.** An alert is sent if the specified reason is detected and no alert has been sent yet for this event. It does not have to be the active event anymore to qualify.
- **shiftoee.** If the OEE for the current shift drops below the specified threshold, an alert will be sent. No alert will be sent in the first (silence window) minutes.

# OEE Alert v3.5

In order to support the Vorne v1.x firmware, you must upgrade to the latest  
**XL Bolt-on Data Collector** version 1.8.9.4

Version 3.5 of OEE Alert supports all versions of Vorne XL device  
firmware (0.7.x through 1.x).

If you have questions or need assistance, please contact either  
Debbie Olk (OEE Alert, OEE Studio, ERP Integration or OEE Console) [debbie.olk@vetiigroup.com]  
or  
Jim Sulzer (XL Bolt-On Data Collector) [jim.sulzer@vetiigroup.com]

OEEAlert, OEEStudio, XL Bolt-On Data Collector are products marketed by the Vetii | GROUP .  
[www.VetiiGROUP.com](http://www.VetiiGROUP.com)

# Contact Us

- As the Vorne Authorized Reporting Consultants, we provide customized reporting solutions, including working with data from your ERP/MRP systems.
- We provide sales, support and customization for OEE Alert. ([www.OEEAlert.com](http://www.OEEAlert.com))
- In addition to customized reporting, we provide support and customization for the **OEEStudio** reporting software (designed specifically for the data captured from the Vorne XL devices).

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