# TrakSYS™ 4.0
# Training Course I
# Lab Manual

(Document Date October 26, 2006)

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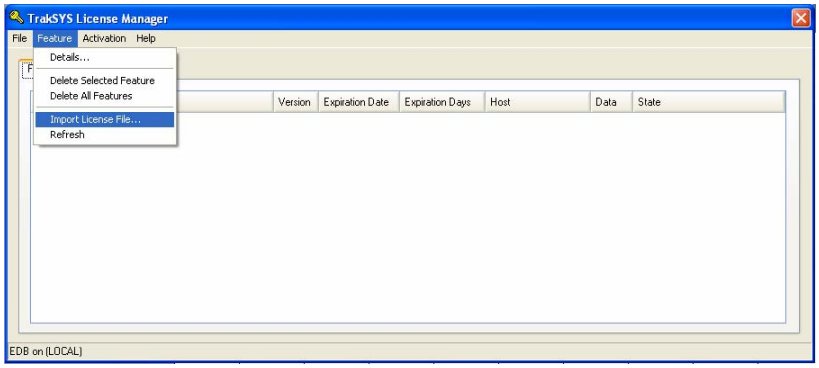
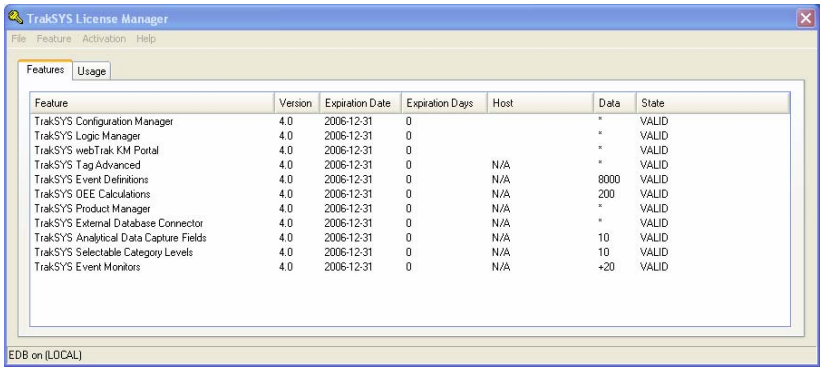
## Lab 01: License Manager

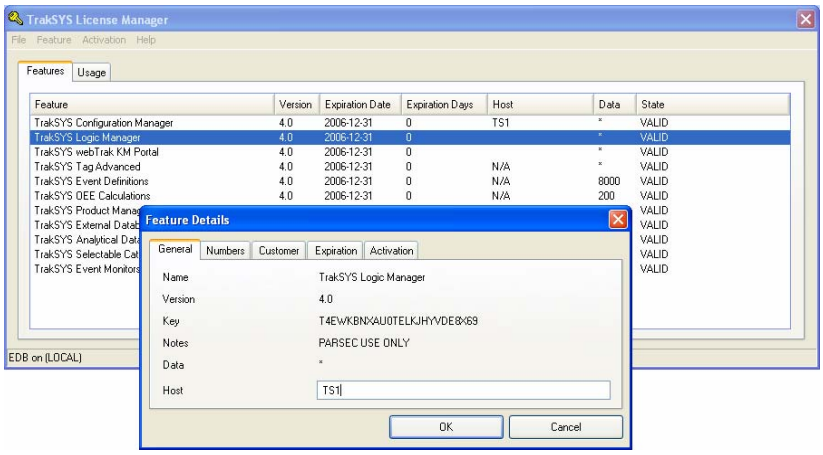
| | |
|---|---|
| **Objectives** | • Get familiar with TrakSYS License Manager<br>• Import an XML License file<br>• Set the Host name to the appropriate machine |
| **Estimated Time to Complete This Lab** | 10 Minutes |

In this lab, before starting the software, you will use the TrakSYS License Manager to install the license file provided for this class.

| Tasks | Detailed Steps |
|---|---|
| Open TrakSYS License Manager | 1. Go to **Start \| All Programs \| Parsec \| TrakSYS \| TrakSYS License Manager**. |
| Import the License File | 1. Go to the **Feature** menu option and select **Import License File**.<br>  <br><br>2. Select the license file called **License.xml** from the **C:\TrakSYS License** folder.<br>  <br> |
| Set the Host | 1. Note the **State** for all the different features is **VALID**.<br>2. Go to **Start \| All Programs \| Parsec \| TrakSYS** and open **TrakSYS Configuration Manager**.<br>3. You should receive a License Manager Error while attempting to open **TrakSYS Configuration Manager.** This is because the Host entry is not set for that feature in |

License Manager.

4. You need to set the Host to your PC name for the **Configuration Manager**, **Logic Manager** and **webTrak** to function properly.
5. In License Manager, go to the Features tab and double-click on **TrakSYS Configuration Manager** feature and in the **Feature Details** page type **TS1** for the **Host**. Click **OK**.
6. Repeat the above step for the **TrakSYS Logic Manager** and **TrakSYS webTrak KM Portal** feature lines.

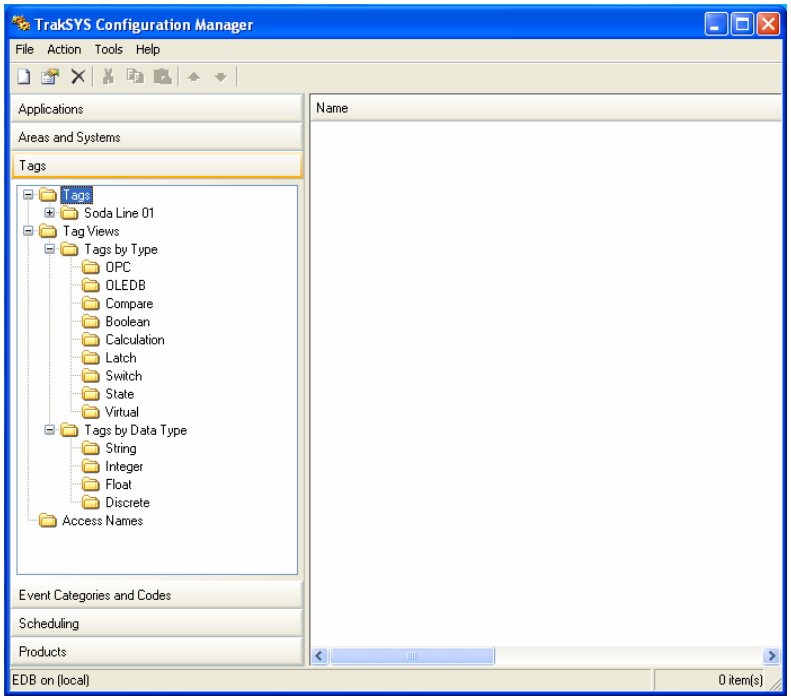


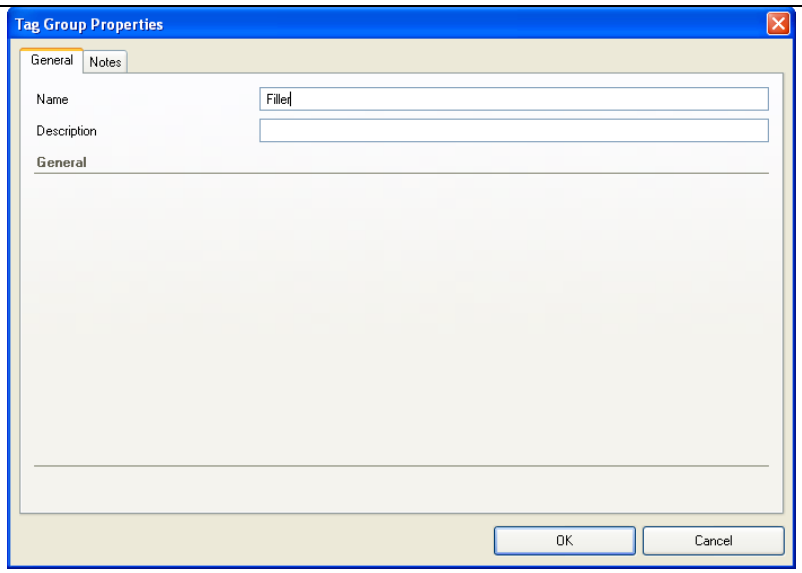

7. Go to **Start | All Programs | Parsec | TrakSYS** and open **TrakSYS Configuration Manager**. This time you should not receive the License Manager error.

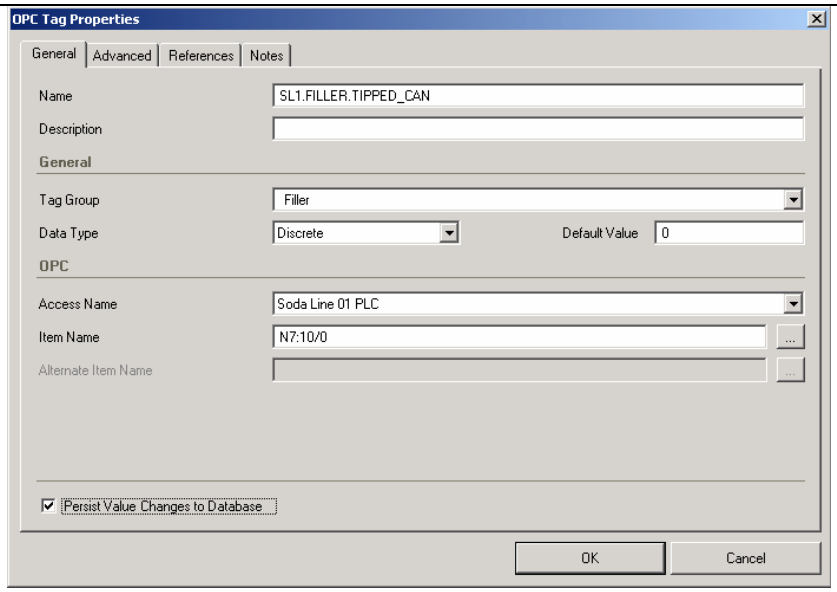
## Lab 02: Configuration Manager – OPC Tags

| | |
|---|---|
| **Objectives** | • Create Tag Groups<br>• Create Access Names and OPC Tags<br>• View Tag changes in Tag Simulator |
| **Estimated Time to Complete This Lab** | 15 Minutes |

In this lab you will start building the Orange County Soda Line configuration by creating OPC Tags, which provide real-time information from automated production equipment.

| Tasks | Detailed Steps |
|---|---|
| Open TrakSYS Configuration Manager | 1. Go to **Start \| All Programs \| Parsec \| TrakSYS \| TrakSYS Configuration Manager**. |
| Create Tag Groups | 1. Go to **Tags** panel on the tree view.<br>2. Right-click on **Tags**.<br>3. Select **New Tag Group**.<br>4. In the **Tag Group Properties** window, type **Soda Line 01** for the **Name**.<br>  <br><br>5. Create more new Tag Groups by right-clicking on the **Soda Line 01** Tag Group and naming the new Tag Groups **OEE Counters**, **Filler**, **Labeler**, and **Casepacker**. |

| | |
|---|---|
| |  |
| Create Access Names | 1. Right-click on **Access Names** and select **New Access Name**.<br>2. Select **New OPC Access Name**.<br>3. Type **Soda Line 01 PLC** for the **Name**.<br>4. Click **OK**. |
| Create OPC Tags | 1. Right-click on the **Soda Line 01** Tag Group.<br>2. Select **New Tag \| New OPC Tag**.<br>3. In the **OPC Tag Properties** page, type **SL1.FILLER.TIPPED_CAN** for the **Name**.<br>4. Select **Filler** in the **Tag Group** drop down menu.<br>5. Select **Discrete** for the **Data Type**.<br>6. Select **Soda Line 01 PLC** for the **Access Name**.<br>7. For **Item Name** type **N7:10/0**, which in a real world situation specifies the address of an actual item in a PLC.<br>8. Click **OK** to save the OPC Tag Properties information. |




9. Repeat steps 1 to 8 to create the following OPC Tags in the **Filler** Tag Group:

| Tag Name | Item Name |
|---|---|
| **SL1.FILLER.NO_CANS** | N7:10/1 |
| **SL1.FILLER.NO_SODA** | N7:10/2 |

10. Repeat steps 1 to 8 to create the following OPC Tag in the **Labeler** Tag Group:

| Tag Name | Item Name |
|---|---|
| **SL1.LABELER.LABEL_JAM** | N7:10/3 |
| **SL1.LABELER.NO_LABELS** | N7:10/4 |

11. Repeat steps 1 to 8 to create the following OPC Tags in the **Casepacker** Tag Group:

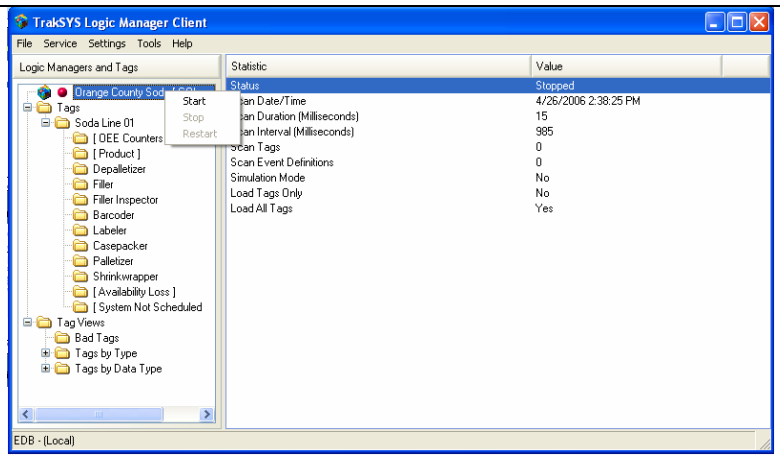
| Tag Name | Item Name |
|---|---|
| **SL1.CASE.PRODUCT_OUT_OF_POSITION** | N7:10/5 |

12. Repeat steps 1 to 8 to create the following OPC Tag in the **OEE Counters** Tag Group, but select **Integer** for the **Data Type**:

| Tag Name | Item Name |
|---|---|
| **SL1.OEE.GOOD_CASES** | N7:0 |

**Run Logic Manager Service**

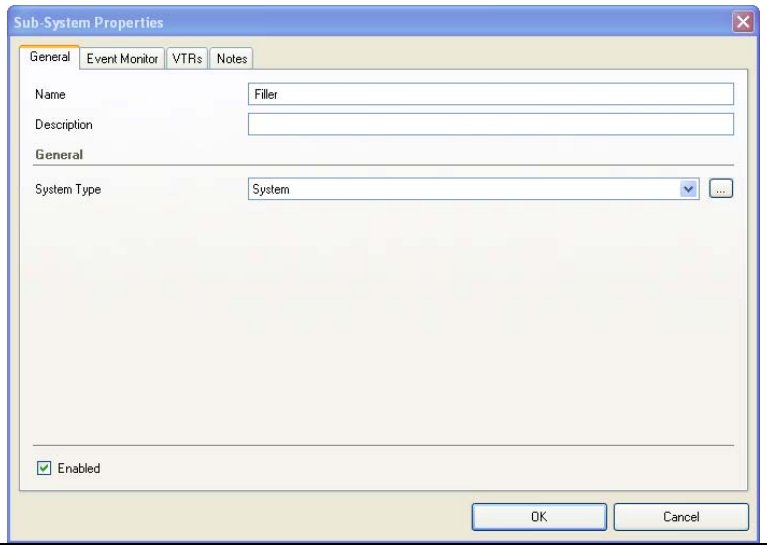
1. Go to **Start | All Programs | Parsec | TrakSYS | TrakSYS Logic Manager Client**.
2. Run the Logic Manager by right-clicking on the Logic Manager icon in the tree view and selecting **Start**. Notice the red icon becomes green when the service started.

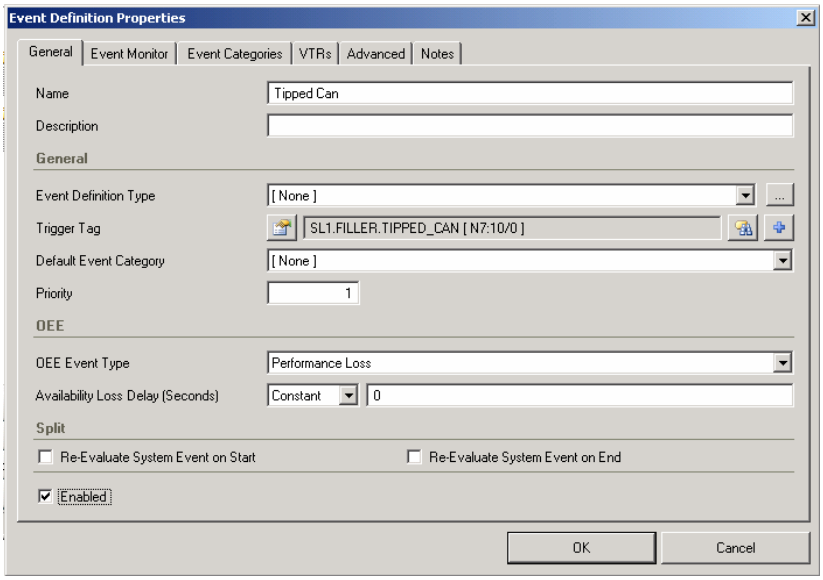
| | |
|---|---|
| |  |
| Run the Tag Simulator *(Only for test purposes)* | 1. Run the **TrakSYS Tag Simulator** application from your desktop. |
| View Tag Changes in Logic Manager | 1. In the Logic Manager tree view under the **Tags** folder, click the **OEE Counters** Tag Group to observe the OPC Tag value changing. |

# Lab 03: Configuration Manager – Areas, Systems and Event Definitions

| | |
|---|---|
| **Objectives** | • Model the Production Environment |
| **Estimated Time to Complete This Lab** | 15 minutes |

In this lab you will start modeling the production environment of the Orange County Soda Line by creating Areas and Systems and then creating Event Definitions based on the Tags you created in the previous lab.

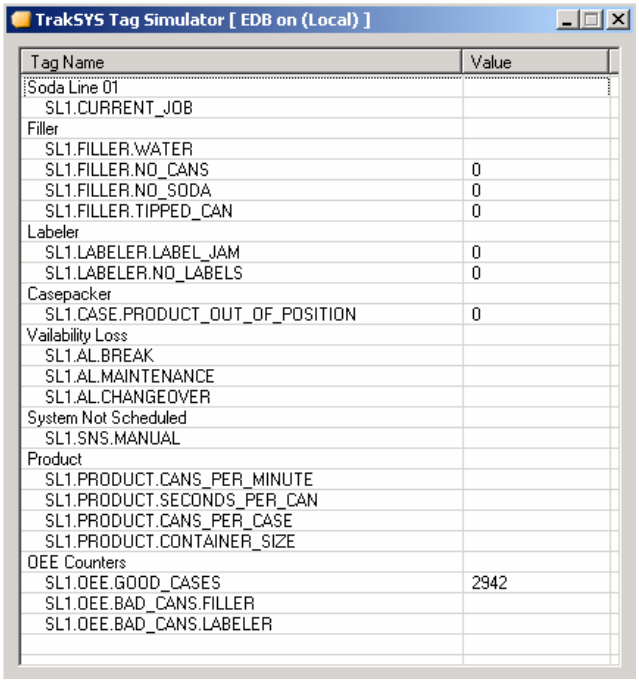
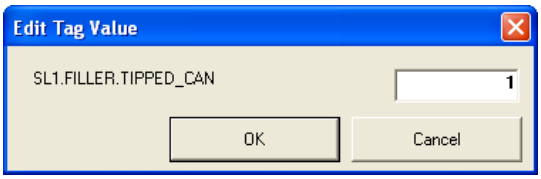
| Tasks | Detailed Steps |
|---|---|
| Create Areas | 1. Go to the **Areas and Systems** panel in the **Configuration Manager** tree view.<br>2. Right-click on the Areas node in the tree view and select **New Area**.<br>3. In the **Area Properties** window, type **Orange County Soda** for the **Name**.<br>4. Configuration Manager pre-selects the **Orange County Soda** Logic Manager.<br>5. Click **OK** to save this Area.<br>6. Under the **Orange County Soda** Area, create another Area and name it **Soda Line 01**. |
| Create Systems and Sub-Systems | 1. Right-click on the **Soda Line 01** Area and select **New System** from the menu list.<br>2. In the **System Properties** page, type **Soda Line 01** for the **Name**.<br>3. Click **OK** to save this System.<br>4. Right-click on the **Soda Line 01** System and select **New Sub-System**.<br>5. In the **Sub-System Properties** page, type **Filler** for the **Name** of the Sub-System and click **OK**.<br>6. Repeat the two above steps to create two more Sub-Systems called **Labeler** and **Casepacker.**<br>  |

| | |
|---|---|
| Create Event Definitions | 1. Right-click on the **Filler** Sub-System in the tree view and select **New Event Definition**.<br>2. In the **Event Definition Properties** page, type **Tipped Can** for the **Name**.<br>3. To find and select a **Trigger Tag**, which is a Discrete Tag that triggers the Event Definition, use the Tag Finder tool by clicking .<br>4. Select **SL1.FILLER.TIPPED_CAN** from the list of Tags in the **Tag Finder**.<br>5. Click **OK** to return to the **Event Definition Properties** page.<br>6. Back in the **Event Definition Properties** page, select **Performance Loss** for the **OEE Event Type** and then click **OK** to save the **Event Definition**.<br>  <br><br>7. Repeat the above steps to define another Event Definition named **No Soda**. The Trigger Tag for this Event Definition should be **SL1.FILLER.NO_SODA**.<br>8. Repeat steps 1 to 6 to create another Event Definition named **No Cans.** The Trigger Tag for this Event Definition should be **SL1.FILLER.NO_CANS**.<br>9. Under the **Labeler** Sub-System, repeat steps 1 to 6 to create an Event Definition named **Label Jam**. The Trigger Tag for this Event Definition should be **SL1.LABELER.LABEL_JAM**.<br>10. Under the **Casepacker** Sub-System, repeat steps 1 to 6 to create an Event Definition named **Product Out of Position**. The Trigger Tag for this Event Definition should be **SL1.CASE.PRODUCT_OUT_OF_POSITION.** |

## Lab 04: webTrak – Event Reports

| | |
|---|---|
| **Objectives** | • Examine the standard Event Reports |
| **Estimated Time to Complete This lab** | 10 minutes |

In this lab, you will view and analyze the Event data logged by Logic Manger.

| Tasks | Detailed Steps |
|---|---|
| Restart Logic Manager | 1. If the Logic Manager Client is not already open, go to **Start \| All Programs \| Parsec \| TrakSYS \| TrakSYS Logic Manager Client**.<br>2. Right-click on **Orange County Soda [TS1]**.<br>3. Select **Restart** to reload the new configuration. |
| TrakSYS Tag Simulator<br>*(Only for test purposes)* | 1. Open the **TrakSYS Tag Simulator** application (if not already open).<br>2. Double-click on **SL1.FILLER.TIPPED_CAN** Tag under Filler group to open the Edit Tag Value dialog box.<br>  <br>3. Change the value of the Tag from **0** to **1**, click **OK** and wait for a few seconds.<br>  <br>4. Double click on the above mentioned Tag again and change its value from **1** to **0** and click **OK**. |

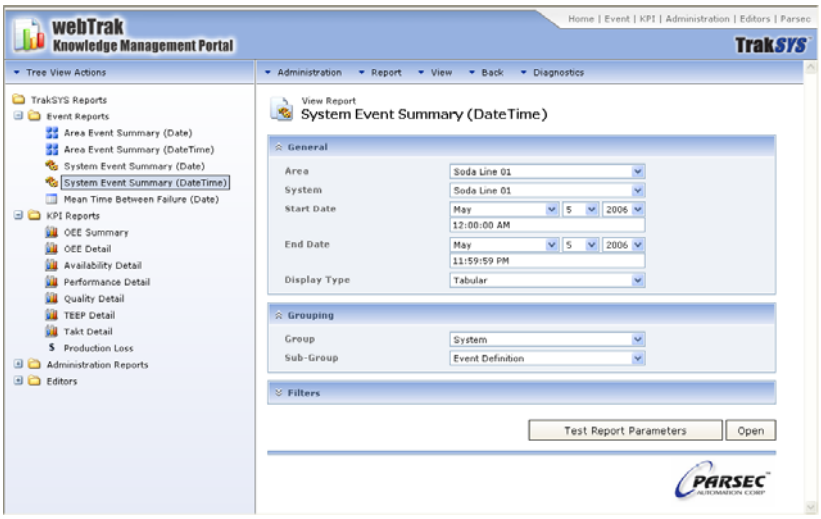
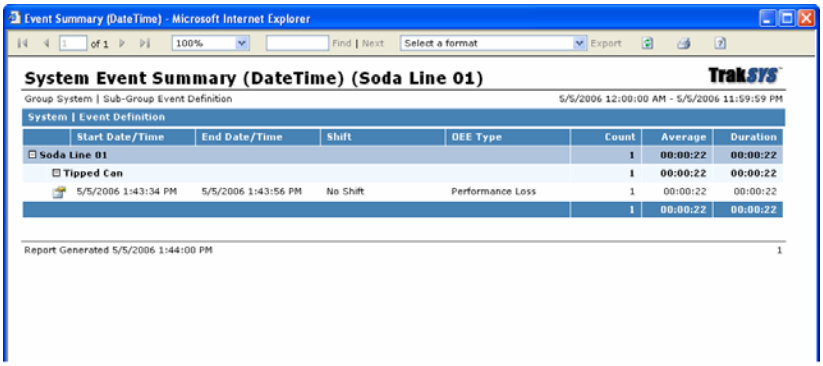
TrakSYS Tag Simulator [ EDB on (Local) ]

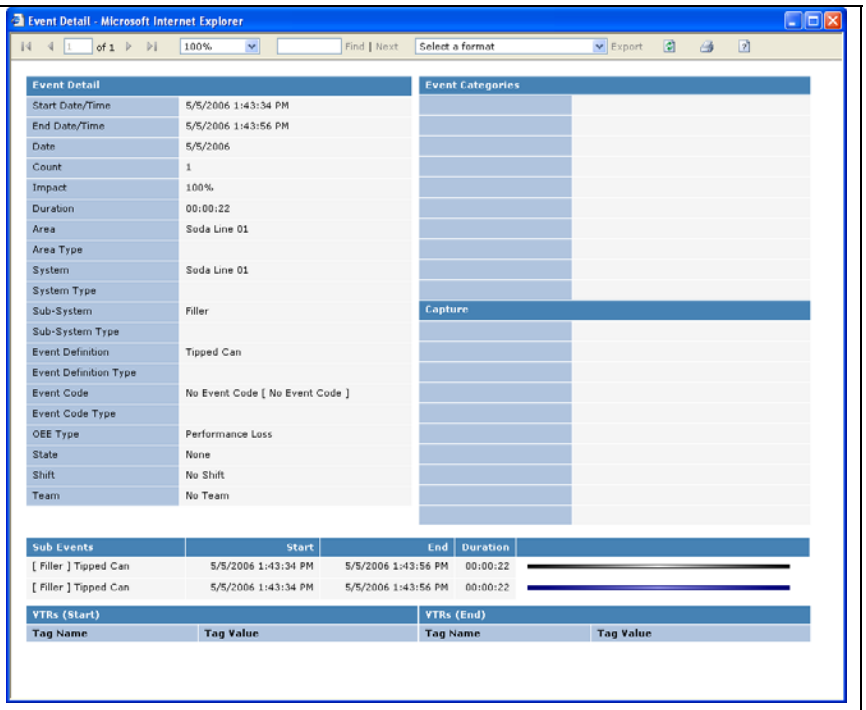
| Tag Name | Value |
|---|---|
| Soda Line 01 | |
| SL1.CURRENT_JOB | |
| Filler | |
| SL1.FILLER.WATER | |
| SL1.FILLER.NO_CANS | 0 |
| SL1.FILLER.NO_SODA | 0 |
| SL1.FILLER.TIPPED_CAN | 0 |
| Labeler | |
| SL1.LABELER.LABEL_JAM | 0 |
| SL1.LABELER.NO_LABELS | 0 |
| Casepacker | |
| SL1.CASE.PRODUCT_OUT_OF_POSITION | 0 |
| Vailability Loss | |
| SL1.AL.BREAK | |
| SL1.AL.MAINTENANCE | |
| SL1.AL.CHANGEOVER | |
| System Not Scheduled | |
| SL1.SNS.MANUAL | |
| Product | |
| SL1.PRODUCT.CANS_PER_MINUTE | |
| SL1.PRODUCT.SECONDS_PER_CAN | |
| SL1.PRODUCT.CANS_PER_CASE | |
| SL1.PRODUCT.CONTAINER_SIZE | |
| OEE Counters | |
| SL1.OEE.GOOD_CASES | 2942 |
| SL1.OEE.BAD_CANS.FILLER | |
| SL1.OEE.BAD_CANS.LABELER | |

Edit Tag Value

SL1.FILLER.TIPPED_CAN 1

OK Cancel

| | |
|---|---|
| Open System Event Summary (DateTime) Report | 1. Go to **Start \| All Programs \| Parsec \| TrakSYS \| TrakSYS webTrak**.<br>2. Open the **webTrak**.<br>3. In the tree view under the **Event Reports** node, click the **System Event Summary (Date Time)** report.<br>4. Select **Soda Line 01** for the **Area** parameter.<br>5. Select **Soda Line 01** for the **System** parameter.<br>6. The **Start Date** and **End Date** parameters should be pre-selected for today's date.<br>7. Click **Open** to view the **System Event Summary (DateTime) (Soda Line 01)** report.<br>  <br><br>8. Examine the Event and its duration.<br>9. Click ⊞ to expand the **Tipped Can** Event Definition.<br>  <br><br>10. Click beside the Event to open the **Event Detail** report. |


Event Detail - Microsoft Internet Explorer
1 of 1
100%
Find | Next
Select a format
Export
Event Detail
Start Date/Time 5/5/2006 1:43:34 PM
End Date/Time 5/5/2006 1:43:56 PM
Date 5/5/2006
Count 1
Impact 100%
Duration 00:00:22
Area Soda Line 01
Area Type
System Soda Line 01
System Type
Sub-System Filler
Sub-System Type
Event Definition Tipped Can
Event Definition Type
Event Code No Event Code [ No Event Code ]
Event Code Type
OEE Type Performance Loss
State None
Shift No Shift
Team No Team
Event Categories
Capture
Sub Events Start End Duration
[ Filler ] Tipped Can 5/5/2006 1:43:34 PM 5/5/2006 1:43:56 PM 00:00:22
[ Filler ] Tipped Can 5/5/2006 1:43:34 PM 5/5/2006 1:43:56 PM 00:00:22
VTRs (Start)
Tag Name Tag Value
VTRs (End)
Tag Name Tag Value

## Lab 05: Tags (Continued), Event Definitions and Event Reports

| | |
|---|---|
| **Objectives** | • Create Boolean and Compare Tags<br>• Create an Event Definition based on a Boolean Tag |
| **Estimated Time to Complete This Lab** | 15 minutes |

In this Lab you will create Compare Tags which allow comparing a Tag Value to another Tag Value or a constant value and return a Discrete result. You will also create a Boolean Tag which allows you to combine the value of two or more Tags using Boolean Logic operations. Afterwards you will define an Event using the Boolean Tag as the Trigger Tag and will make that Event Definition active and inactive to be able to observe it in webTrak Event Reports.

| Tasks | Detailed Steps |
|---|---|
| Create Tags | 1. Go to **Tags** Panel in **Configuration Manager** tree view.<br>2. Create a new **OPC Tag** and **Name** it **SL1.FILLER.WATER** in the **Filler Tag Group**. The **Access Name** for this Tag is **Soda Line 01 PLC** and the **Item Name** is **N7:3**. The Data Type for this Tag should be set to **Integer**.<br>3. Go to the **TrakSYS Tag Simulator** and double click on the **SL1.FILLER.WATER** Tag. Change the Tag value from **0** to **80**.<br>4. Back in **Tags** panel, Right click on the **Filler** Tag Group, then select **New Compare Tag** and create the following two Compare Tags:<br><br>a. The first Tag should be named **SL1.FILLER.WATER_HIGH**. In the **Compare** section of the properties page, select **Tag** for the **Left Operand** and then find and pick **SL1.FILLER.WATER** as the Left Operand. Select "**>**" **Operation** and type **82** for the **Right Operand** and click OK.<br>b. The second Tag should be named **SL1.FILLER.WATER_LOW**. The Left Operand for this Tag is **SL1.FILLER.WATER**. Select "**<**" for the **Operation** and type **78** for the **Right Operand** and click OK.<br>5. In **Filler** Tag Group create a new **Boolean Tag** and name it **SL1.FILLER.WATER.INCORRECT_MIXTURE**. Select **OR** as the Boolean Operation and Add the two compare tags you just made (**SL1.FILLER.WATER_HIGH** and **SL1.FILLER.WATER**) to the Boolean tag list view. |

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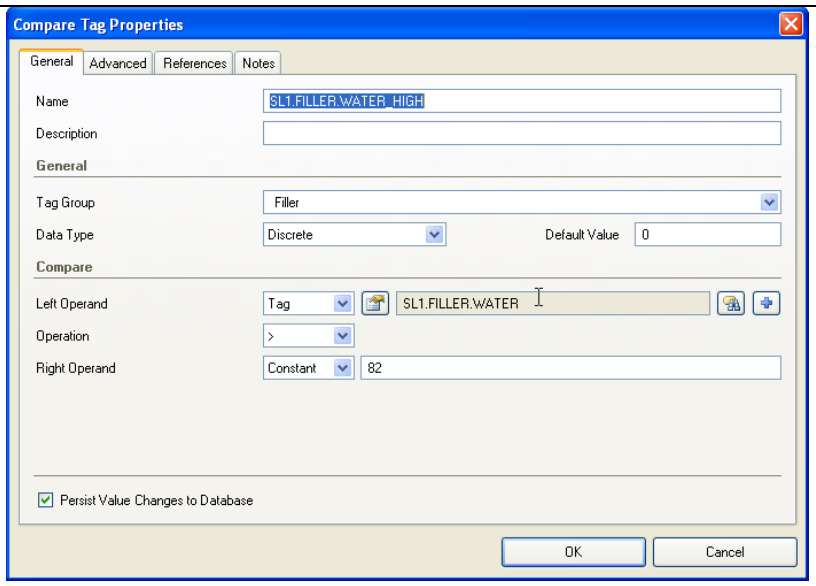
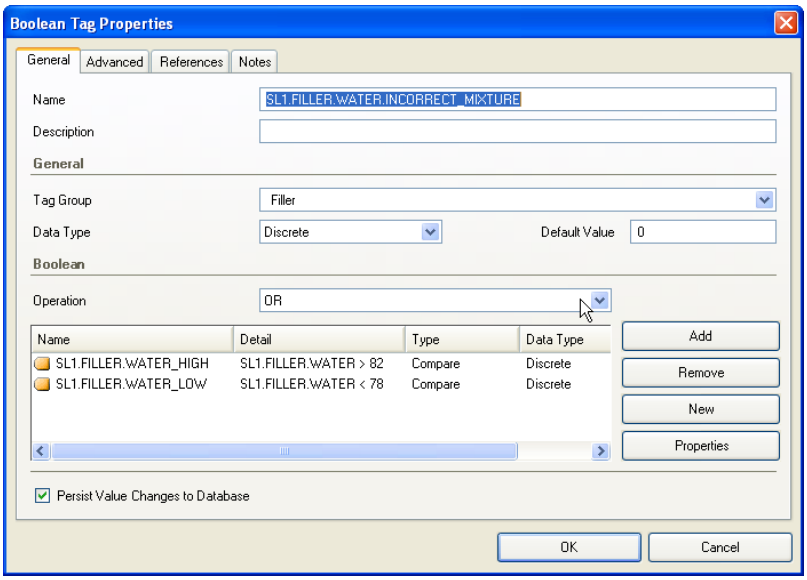
<tr>
<td></td>
<td>



6. Click **OK** to save the Boolean Tag.



</td>
</tr>
<tr>
<td>Create an Event Definition</td>
<td>
1. Go to **Areas and Systems** and under the **Filler** Sub-System create a new Event Definition and name it **Water Incorrect Mixture**. For the **Trigger Tag**, select **SL1.FILLER.WATER.INCORRECT_MIXTURE**. Select **Performance Loss** as the OEE Event Type and click **OK** to save the Event Definition.
2. Restart **Logic Manager** to load the new configuration.
</td>
</tr>
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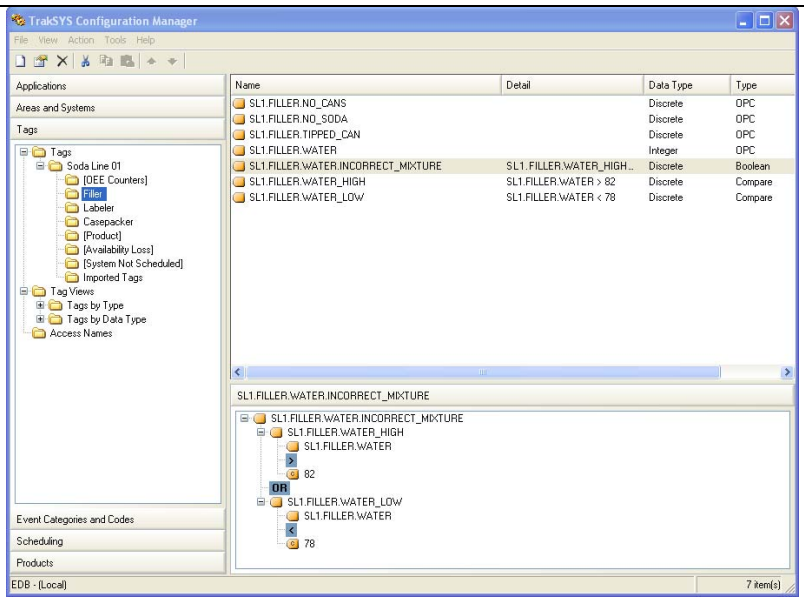
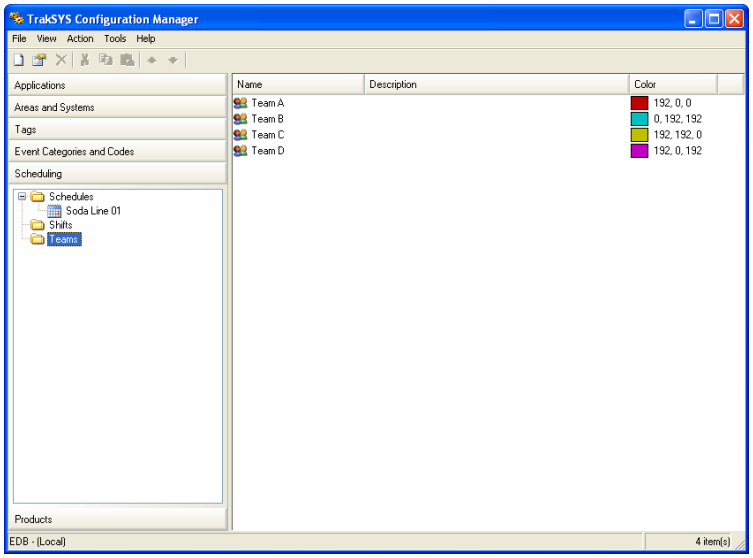
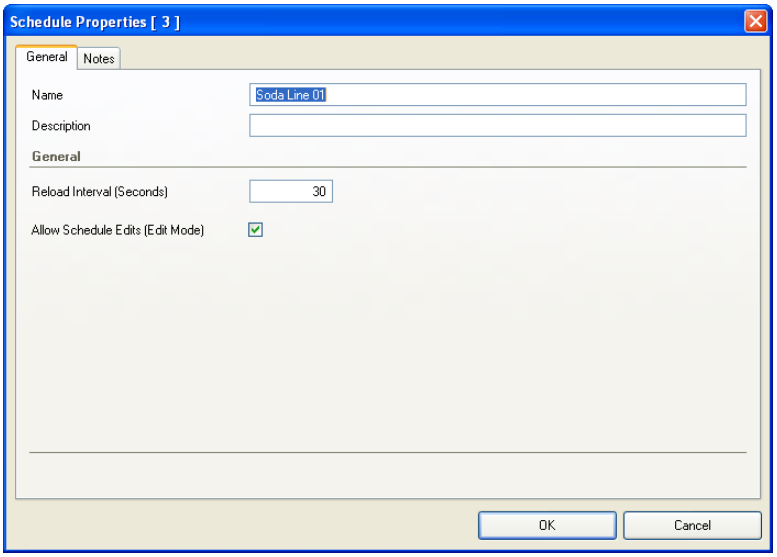
| |  |
| Tag Simulator and Event Report | 1. Go to **TrakSYS Tag Simulator** and double click on **SL1.FILLER.WATER**. To activate the **Water Incorrect Mixture** Event, change the value of this tag to **90** or **70**, click **OK** and wait for a few seconds. To make the Event inactive, change the value to a number between **78** and **82**. (Make sure this Event is inactive before moving to the next lab)<br>2. You can view this Event in webTrak by opening the System Event Summary (DateTime) report for Soda Line 01. |

## Lab 06: Configuration Manager – Scheduling and Reports

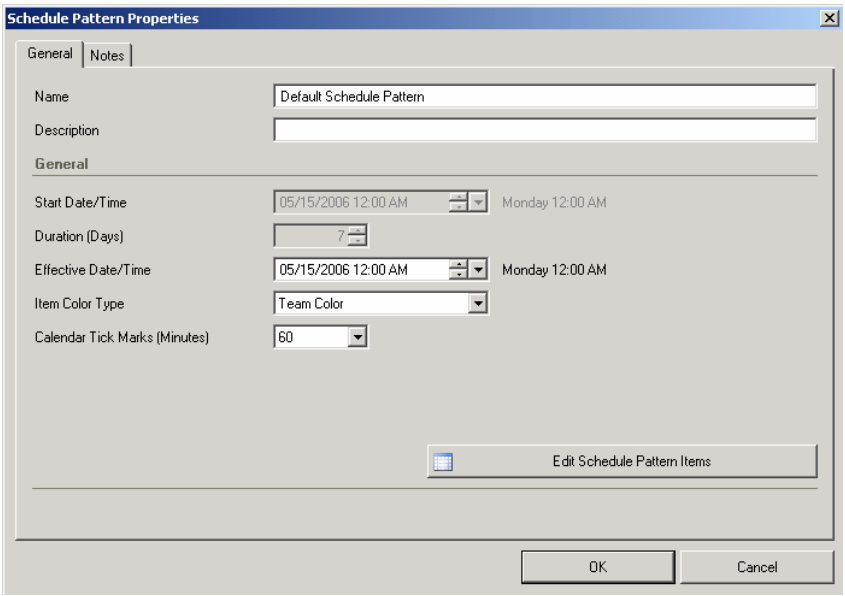
| | |
|---|---|
| **Objectives** | • Create Teams, Shifts, and a Schedule |
| **Estimated Time to Complete This Lab** | 20 minutes |

In this lab, you will make 2 Shifts, 4 Teams, and 1 Schedule Pattern in which the Teams change Shifts every 10 hours. After creating the Schedule, you must assign it to the Soda Line 01 System and restart Logic Manager before it will take effect.

| Tasks | Detailed Steps |
|---|---|
| Create New Teams | 1. In **Configuration Manager**, go to **Scheduling**.<br>2. In the tree view, right-click on **Teams** and select **New Team**.<br>3. In the **Team Properties** page, type **Team A** for the **Name**.<br>4. Select **Red** for the **Color** of this team.<br>5. Repeat the above steps to make 3 more Teams named **Team B**, **Team C**, and **Team D**.<br>6. Select **Green**, **Yellow**, and **Pink** respectively for the **Colors** of the above teams.<br>  |
| Create New Shifts | 1. In the tree view, right-click on **Shifts** and select **New Shift**.<br>2. In the **Shift Properties** page, type **Shift 1** for the **Name**.<br>3. Select **White** for the **Color**.<br>4. Click **OK** to save this Shift.<br>5. Repeat the above steps to make one more Shift named **Shift 2**. |
| Create a New Schedule and Schedule Pattern | 1. Right-click on **Schedules** and select **New Schedule**.<br>2. In the **Schedule Properties** page, type **Soda Line 01** for the **Name**.<br>3. Verify that the **Allow Schedule Edits (Edit Mode)** checkbox is checked.<br>4. Click **OK** to save this schedule. |

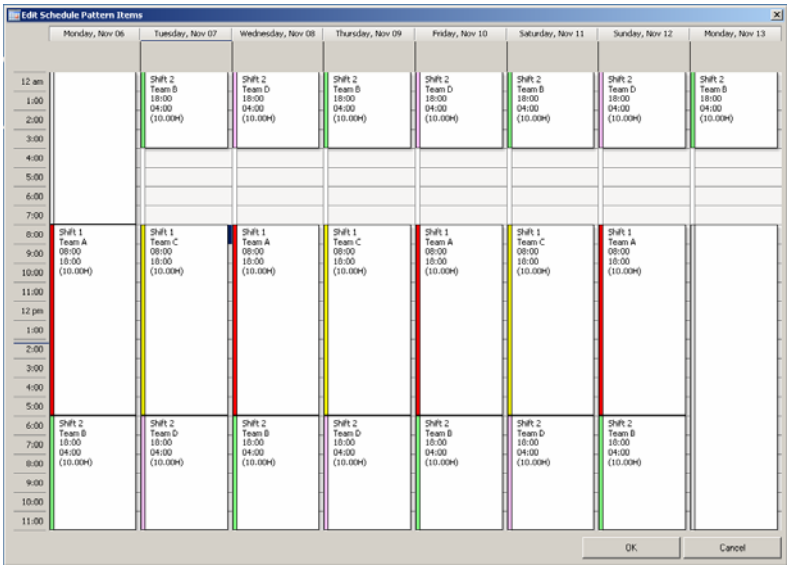



5. Right-click on the **Soda Line 01** Schedule in the tree view and select **New Schedule Pattern** (notice that the Schedule is in Edit Mode).
6. In the **Schedule Pattern Properties** page, type **Default Schedule Pattern** for the **Name**.
7. Set the **Start Date/Time** to the date for Monday of the current week at 8:00 am.
8. Enter **7** for the **Duration (Days)**.
9. Set the **Effective Date/Time** to the date for Monday of the current week.
10. Select **Team Color** for the **Item Color Type**. This sets the color scheme for displaying **Schedule Pattern Items**.
11. Select **60** for **Calendar Tick Marks (Minutes)**.
12. Click the **Edit Schedule Pattern Items** button.



13. In **Edit Schedule Pattern Items** page, click on the cell representing Monday 8:00 am and drag the mouse till Monday 6:00 pm cell, right-click on the selected area and select **New Schedule Pattern Item** to define a schedule pattern Item that lasts for 10 hours. In the **Schedule Pattern Item Properties** page, select **Shift 1** for **Shift** and **Team A** for **Team**.
14. Click **OK** to save this Schedule Pattern Item.
15. Follow the table below and create a 2-day schedule pattern and repeat the pattern until Sunday:

| Day 1 | Day 2 |
|---|---|
| Shift 1<br>Team A<br>8:00 am<br>To<br>6:00 pm | Shift 1<br>Team C<br>8:00 am<br>To<br>6:00 pm |
| Shift 2<br>Team B<br>6:00 pm<br>To<br>4:00 am | Shift 2<br>Team D<br>6:00 pm<br>To<br>4:00 am |



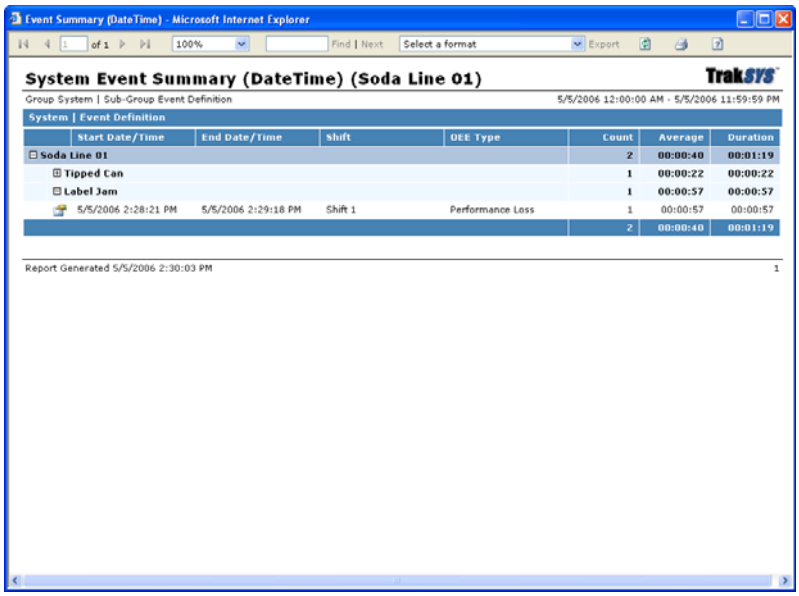

16. Save the Schedule Pattern by clicking on **OK**.
17. Right-click the **Soda Line 01** Schedule and uncheck **Allow Schedule Edits (Edit Mode)**.
18. Go to the **Areas and Systems** panel, open the **Soda Line 01 System Properties** page, select **Soda Line 01 Schedule** to assign the new **Schedule** to your System, and click **OK**.
19. Restart Logic Manager to load the new configuration.

webTrak Reports

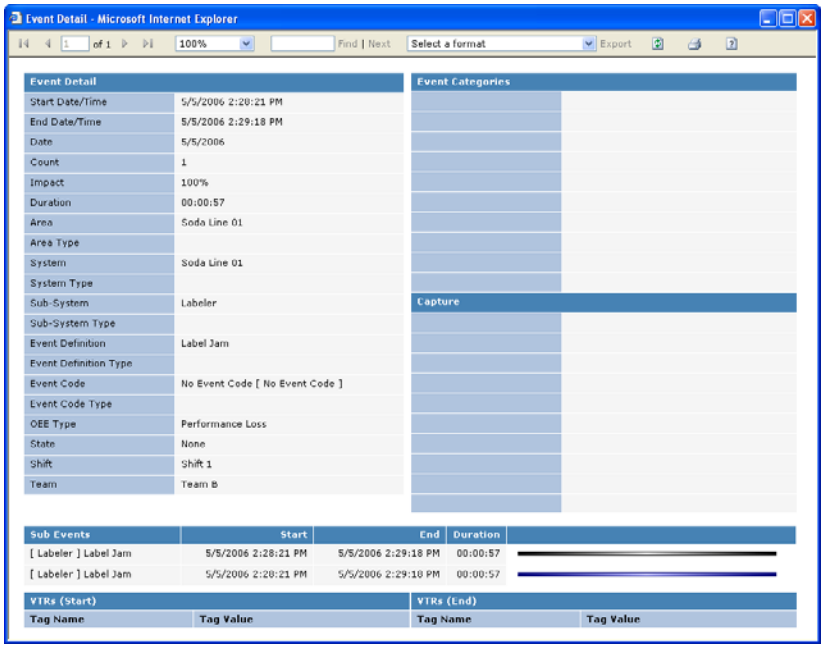
1. In **TrakSYS Tag Simulator**, change the value of **SL1.LABELER.LABEL_JAM** Tag to **1** to activate **Label**

**Jam** Event. After a few seconds change it back to **0** and go to webTrak.

2. Open the **System Event Summary** report for **Soda Line 01**.




3. In Event Detail report, note the Shift and Team.



## Lab 07: Configuration Manager – Capture Schemes and Reports

| | |
|---|---|
| **Objectives** | • Create System Capture Schemes and examine the Event Reports |
| **Estimated Time to Complete This lab** | 15 minutes |

In this lab, you will create a System Capture Scheme and assign System Capture Tags to your System's Capture Scheme Columns. Logic Manager records the values of Capture Tags when System Events occur and makes the captured values available in Event Detail reports.

| Tasks | Detailed Steps |
|---|---|
| Create Virtual Tags | 1. In the **Configuration Manager** tree view, go to the **Tags** panel.<br>2. Right Click on **Soda Line 01** Tag Group and select **New Tag**.<br>3. Select **New Virtual Tag** from the menu list.<br>4. Type **SL1.CURRENT_JOB** for the **Name** of the Tag, select **String** for the **Data Type** and click **OK**.<br>5. Under the **Soda Line 01** Tag Group, create a **New Tag Group**.<br>6. Type **Product** for the **Name** of this Tag Group and click **OK**.<br>7. Right click on the **Product** Tag Group and select **New Tag**.<br>8. Select **New Virtual Tag** from the menu list.<br>9. Type **SL1.PRODUCT.CONTAINER_SIZE** for the **Name** of the Tag and select **String** for the **Data Type**. |
| Create a System Capture Scheme | 1. In **Configuration Manager**, go to **Areas and Systems.**<br>2. Expand the **Capture Schemes** node.<br>3. Right-click **System Capture Schemes** and select **New System Capture Scheme**.<br>4. In the **System Capture Scheme Properties** page, type **Soda Line 01 System Capture** for the **Name** and then click **OK**.<br>5. Double-click the **01** Capture Scheme Column to open the **System Capture Scheme Properties** page. Type **Job** for the **Name**, check the **Split Event on Value Change** checkbox, and then click **OK**. |

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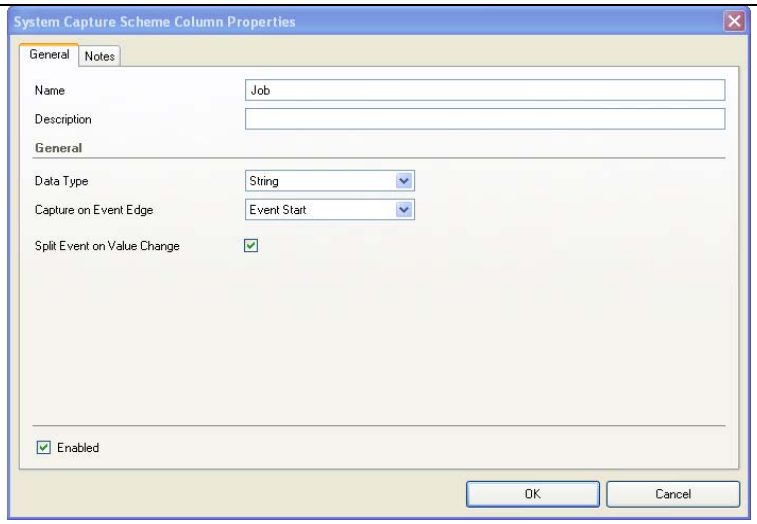

<br>
6. Double-click the **02** Capture Scheme Column to open the **System Capture Scheme Properties** page. Type **Container Size** for the **Name**, check the **Split Event on Value Change** checkbox, and then click **OK**.
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1. Under **Areas and Systems**, right-click the **Soda Line 01 System Properties** and go to the **Capture** tab.
2. Select **Soda Line 01 System Capture** for the Capture Scheme.
3. Click the **Job** Capture Scheme Column and then click the **Properties** button to open the **System Capture Tags Properties** page. Find and select **SL1.CURRENT_JOB** for the Capture Tag. Go to the **Virtual Tag Properties** page by clicking on and type **L1-REGULAR-0001** for the **Value** and then click **OK**.
4. Click OK to save the **System Capture Tag Properties**.
5. Click the **Container Size** Capture Scheme Column and then click the **Properties** button to open the **System Capture Tags Properties** page. Find and select **SL1.PRODUCT.CONTAINER_SIZE** for the Capture Tag. Go to the **Virtual Tag Properties** page by clicking on and type **32OZ** for the **Value** and then click **OK**.
6. Click OK to save the **System Capture Tag Properties**.
7. In the **System Properties** page, click **OK** to save the System.
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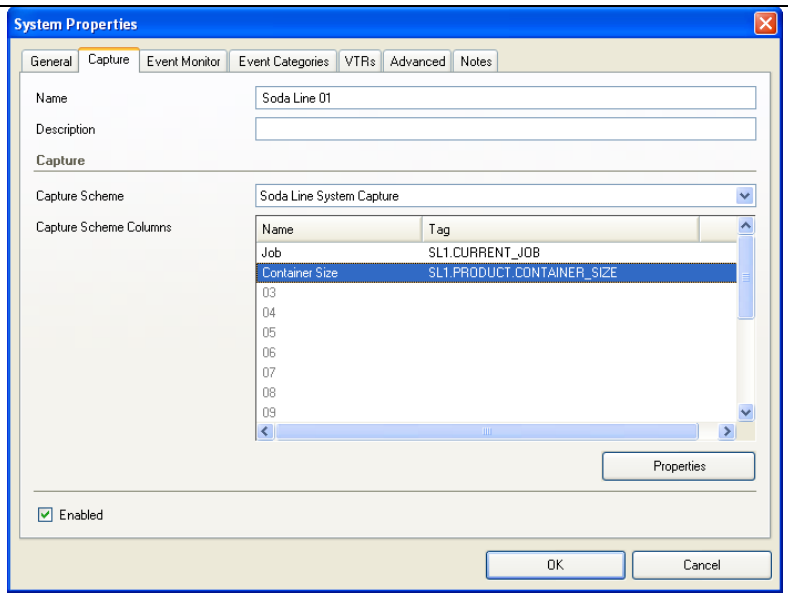


8. Restart **Logic Manager** to load the new configuration.
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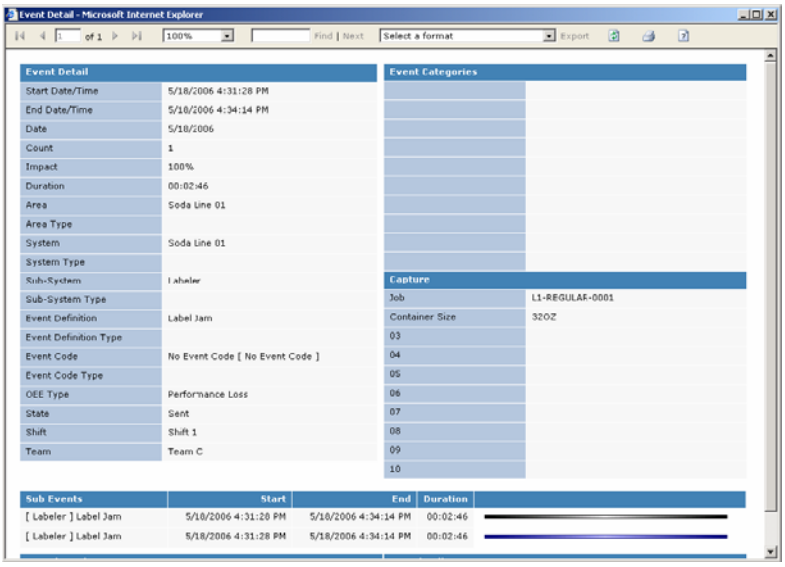
<tr>
<td>webTrak Reports</td>
<td>
1. In TrakSYS Tag Simulator, change the value of **SL1.FILLER.TIPPED_CAN** from **0** to **1** to activate a Tipped Can event. After a few seconds, change it back to **0**.
2. Go to webTrak and open the **System Event Summary (DateTime)** report.
3. Select the **Soda Line 01** Area and the **Soda Line 01** System and **Open** the report.
4. Note the captures values for **Job** and **Container Size** in the **Event Detail** report for the latest Tipped Can event.



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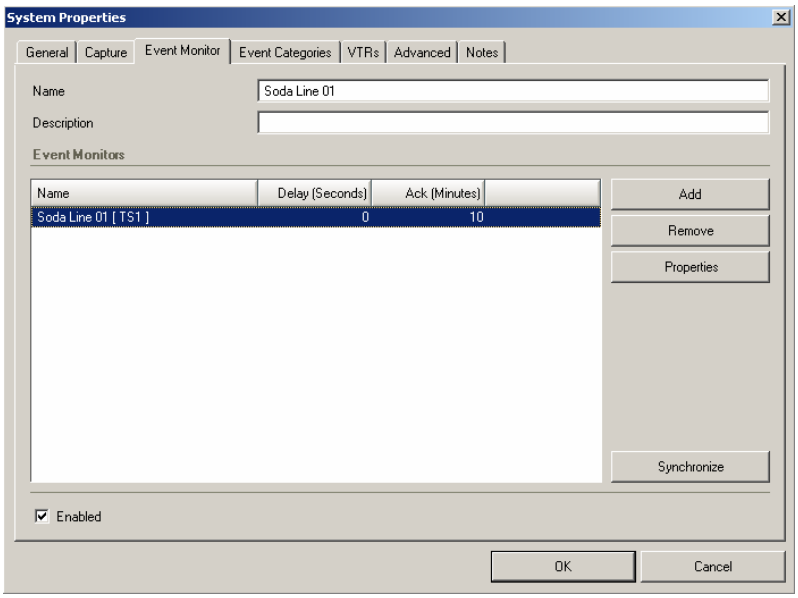
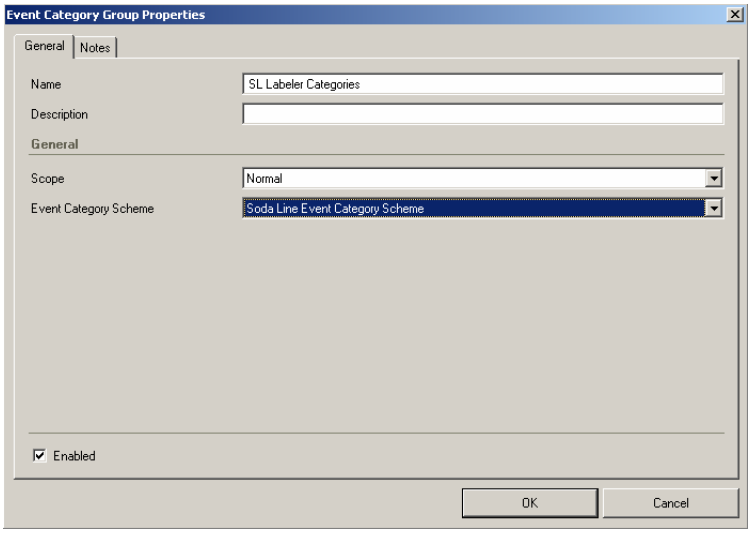
## Lab 08: Event Monitor

| | |
|---|---|
| **Objectives** | • Become familiar with a Sample Event Monitor Application and the basic Event Monitor functionality |
| **Estimated Time to Complete This lab** | 20 minutes |

In this lab you will configure a new Event Monitor, which represents a running instance of the Event Monitor control(s) on a client node.

You will use Event Monitor to annotate and acknowledge an Event, as well as categorize it using the Event Categories assigned to the corresponding Event Definition.

| Tasks | Detailed Steps |
|---|---|
| Create a new Event Monitor | 1. In **Configuration Manager** go to **Applications**.<br>2. Right-click on **Event Monitors** and select **New Event Monitor**.<br>3. In the **Event Monitor Properties** page, type **Soda Line 01** for the **Name**.<br>4. Leave the **Host Type** pre-selected to **Computer Name**, type **TS1** for the **Computer Name**, and then click **OK**.<br>5. For the **Event Monitor** to receive event notifications, assign it to the **Soda Line 01** system in **Areas and Systems**; in the property page for the System, go to the Event Monitor tab and then click **Add** to add the Event Monitor to the **Event Monitors** list.<br>6. In the **System Event Monitor Definition Properties** page, select **Soda Line 01 [TS1]** for the **Event Monitor** and then click **OK**.<br>7. Click **OK** in the **System Properties** page.<br>  |

| | |
|---|---|
| Create an Event Category in Configuration Manager | 1. Go to the **Event Categories and Codes** panel in **Configuration Manager**.<br>2. Right-click on **Event Categories** and select **New Event Categories Group**.<br>3. In the **Event Category Group Properties** page, type **SL Labeler Categories** for the **Name**. Leave the **Scope** pre-selected to **Normal**. Select **Soda Line Event Category Scheme** for the **Event Category Scheme**. Click **OK**.<br>  <br><br>4. Right-click on **SL Labeler Categories** and select **New Event Category [Reason]**.<br>5. In the **Event Category Properties [Reason]** page, type **Label Jam at Drum** for the **Name** of the **Event Category** and then click **OK**.<br>6. Repeat steps 4 and 5 to create three more Event Categories named:<br>• **Label Jam at Infeed Guide**<br>• **Label did not Adhere**<br>• **Label did not Transfer to Drum** |

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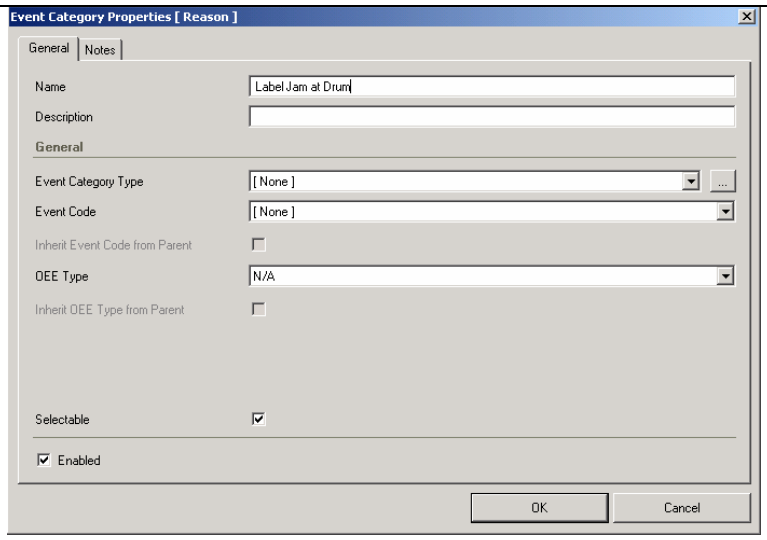
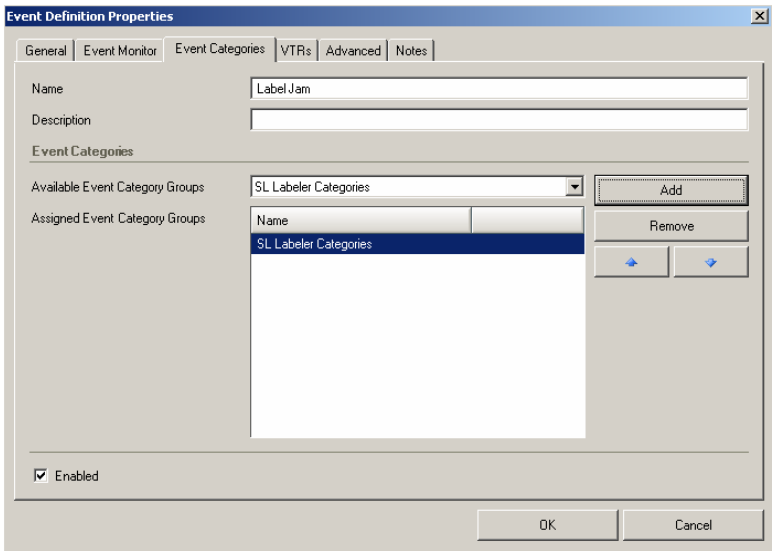



7. Go to **Areas and Systems** and assign this Event Category to the **Label Jam** Event Definition under the **Labeler** Sub-System. Right-click on the **Label Jam** Event Definition and go to **Properties**. In the **Event Definition Properties** page, go to the **Event Categories** tab and pick **SL Labeler Categories** from the **Available Event Category Groups** drop down list. Click the **Add** button to add this Event Category to the **Assigned Event Category Groups**. Click **OK** to save the changes to the Event Definition.




8. Restart **Logic Manager** for the configuration changes to take effect.
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<td>Equipment Events</td>
<td>
1. To activate a Labeler Event, go to TrakSYS Tag Simulator and change the value of **SL1.LABELER.LABEL_JAM** from **0** to **1**.
2. Run the **TrakSYS Event Monitor** application from
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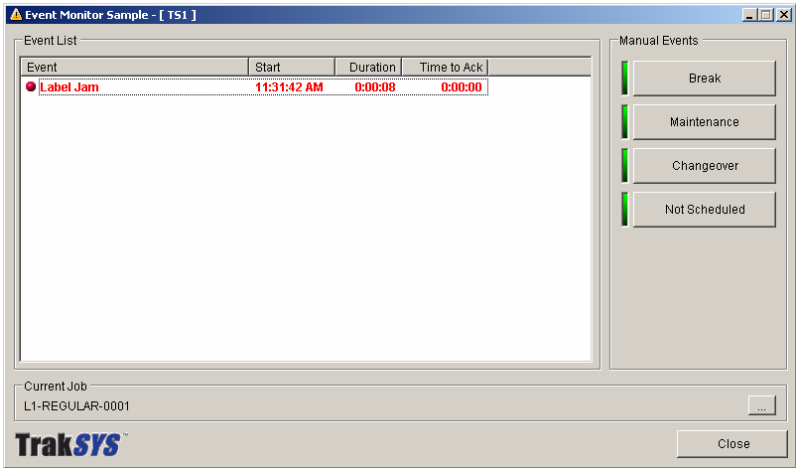
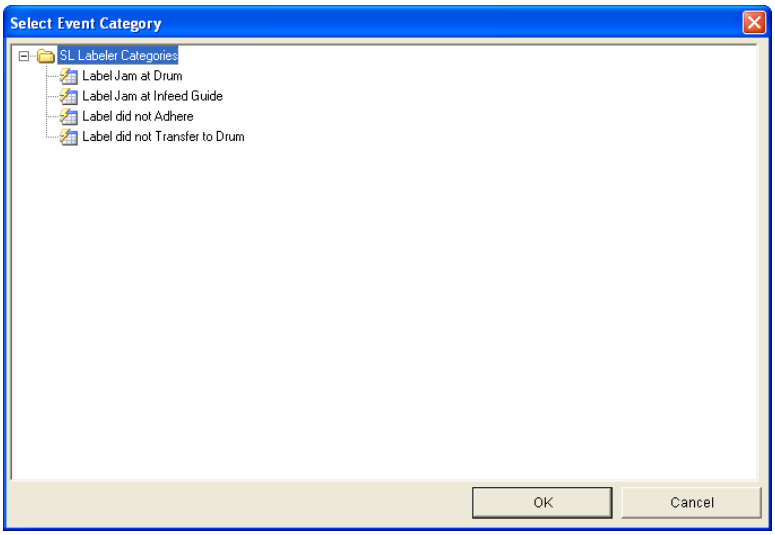
your desktop.

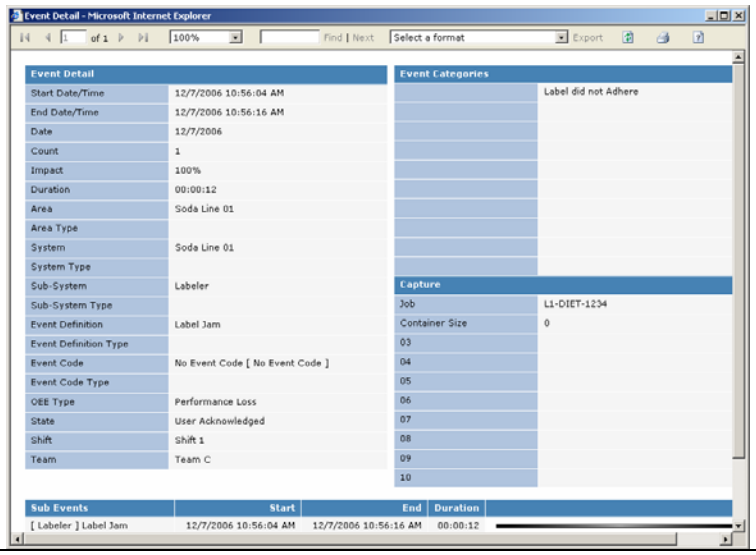
3. In Event Monitor Sample application, note the red color for the Labeler event under the **Event List**.
4. In TrakSYS Tag Simulator, change the value of **SL1.LABELER.LABEL_JAM** Tag from **1** to **0**.




5. In Event Monitor Sample, double-click on the **Labeler** event in the **Event List**. In the **Event Properties** page, to categorize this Event, click ..., select **Label did not Adhere** from the **SL Labeler Categories** in the **Select Event Category** page and then click **OK**.



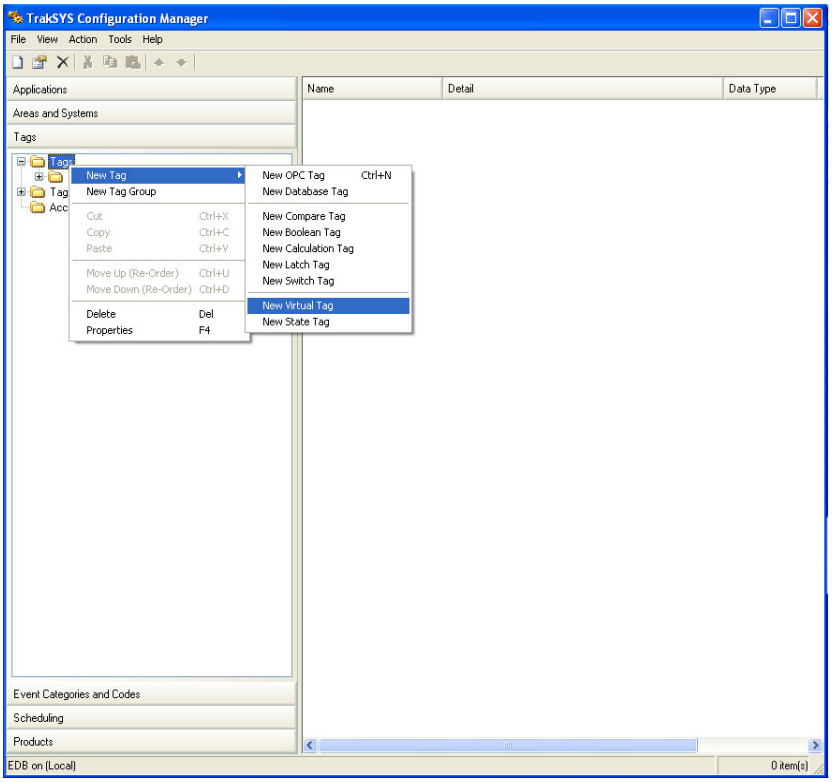

6. To acknowledge this Event, click the **Acknowledge** button on the **Event Properties** page.

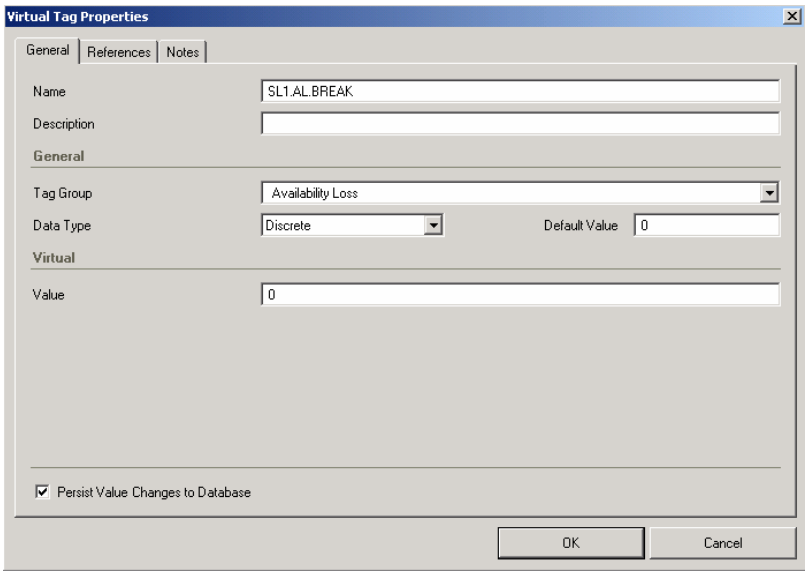
| | |
|---|---|
| Event Reports | 1. Go to the **Event Reports** in **webTrak** and click on the **System Event Summary (Date Time)** report. Select the **Soda Line 01** Area and the **Soda Line 01** System. Click **Open**.<br>2. Expand the **Label Jam** Event Definition and open the **Event Detail** report. Note the captured **Job** and **Event Category**.<br>  <br> |

# Lab 09: Configuration Manager – Virtual Tags and more Event Definitions

| | |
|---|---|
| **Objectives** | • Create Virtual Tags<br>• Create Event Definition Groups<br>• Define more Event Definitions |
| **Estimated Time to Complete This Lab** | 20 minutes |

In Lab 03 you defined Performance Loss Events. In this lab, after creating Virtual Tags, you will create Event Definitions with System Not Scheduled and Availability Loss OEE Event Types. You will also work with the Manual Events in the Event Monitor Sample and view the result in webTrak reports.

| Tasks | Detailed Steps |
|---|---|
| Create Tag Groups | 1. In the **Configuration Manager** tree view, go to the **Tags** panel. Under the **Soda Line 01** Tag Group, create the following Tag Groups:<br><br>• **Availability Loss**<br>• **System Not Scheduled** |
| Create Virtual Tags | 1. Right-click on **Tags** and select **New Tag**.<br>2. From the Tag type list select **New Virtual Tag**.<br><br>  <br><br><br>3. In the **Virtual Tag Properties** page, type **SL1.AL.BREAK** for the **Name**.<br>4. Select **Availability Loss** for the **Tag Group**. |

| | |
|---|---|
| | 5. Select **Discrete** for the **Data Type**.<br>6. Click **OK** to save the Tag.<br>  <br><br>7. Repeat steps 1 to 6 to create another Virtual Tag. This time, in step 3, type **SL1.AL.MAINTENANCE** for the **Name** of the Tag.<br>8. Repeat steps 1 to 6 to create another Virtual Tag. In step 3, type **SL1.AL.CHANGEOVER** for the Name of the Tag.<br>9. Repeat steps 1 to 6 to create another Virtual Tag. In step 3 type **SL1.SNS.MANUAL** for the **Name** of the Tag, and in step 4, select **System Not Scheduled** for the **Tag Group**. |
| Create Event Definition Groups | 1. Go to **Areas and Systems** Panel.<br>2. Right click the **Soda Line 01** System.<br>3. Select **New Event Definition Group**.<br>4. In the **Event Definition Group Properties** page, type **Availability Loss Events** for the **Name** and then click **OK**.<br>5. Create another **Event Definition Group** and name it **System Not Scheduled Events**. |
| Create Availability Loss Events | 1. Right-click the **Availability Loss Events** Event Definition Group and select **New Event Definition** from the menu list.<br>2. In the **Event Definition Properties,** type **Break** for the **Name** of the Event.<br>3. For the **Trigger Tag**, find and select **SL1.AL.BREAK**.<br>4. For **OEE Event Type**, select **Availability Loss**.<br>5. Click **OK** to save this Event Definition. |

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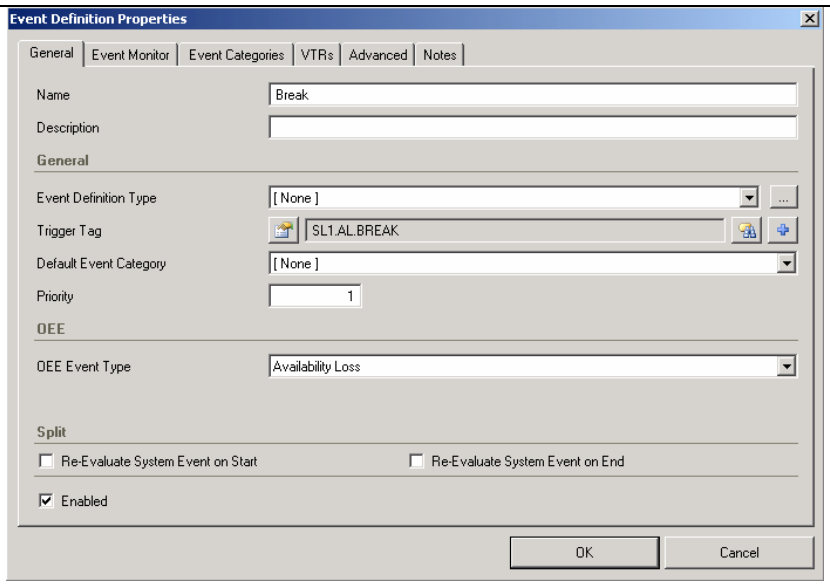


6. Repeat the above steps to create another Event Definition named **Maintenance**. The **Trigger Tag** for this Event should be **SL1.AL.MAINTENANCE**.
7. Repeat the above steps to create another Event Definition named **Changeover**. The **Trigger Tag** for this Event should be **SL1.AL.CHANGEOVER**.
</td>
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<tr>
<td>Create System Not Scheduled Event</td>
<td>
1. Right-click on **System Not Scheduled Events** and select **New Event Definition**.
2. In the **Event Definition Properties,** type **System Not Scheduled** for the **Name**.
3. For the **Trigger Tag,** find and pick **SL1.SNS.MANUAL**.
4. For the **OEE Event Type,** select **System Not Scheduled**.
5. Click **OK** to save this Event Definition.
6. Restart **Logic Manager** for the configuration changes to take effect.
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<td>Manual Events in Event Monitor</td>
<td>
1. Run the **TrakSYS Event Monitor** application from your desktop.
2. Set the **Current Job** by clicking on ... button, typing **L1-DIET-1234** for Job in **Job Properties** page and clicking **OK**.

3. In **TrakSYS Event Monitor** application, activate a maintenance event by clicking the **Maintenance** button
</td>
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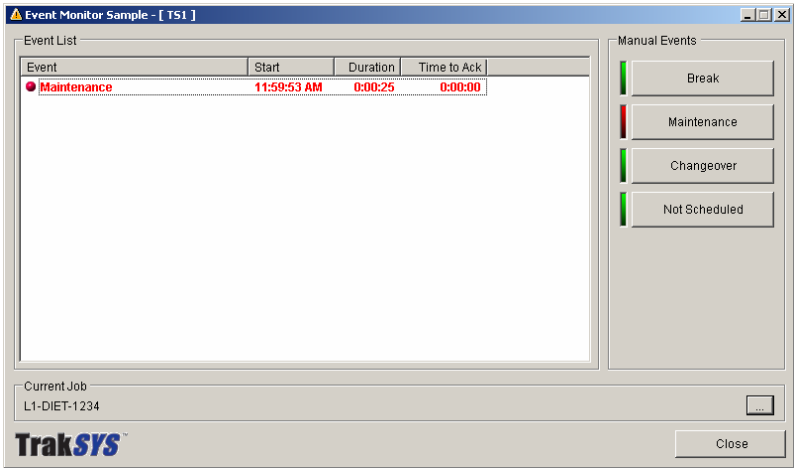
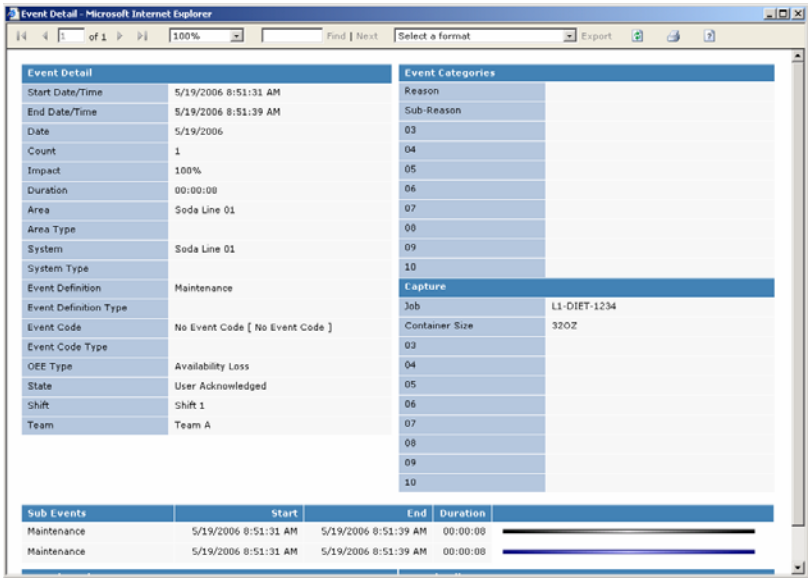
under **Manual Events**.




4. Click the **Maintenance** button again under **Manual Events** to end the Event. The Event color will change from red to green, indicating that it is no longer active.
5. Double-click the **Maintenance** Event in the **Event List**. Acknowledge the Event by clicking the **Acknowledge** button. The Event will disappear from the **Event List**.
6. Go to the **webTrak** and open a System Event Summary (DateTime) report. Expand the **Maintenance** Event Definition and open the Event Detail report.



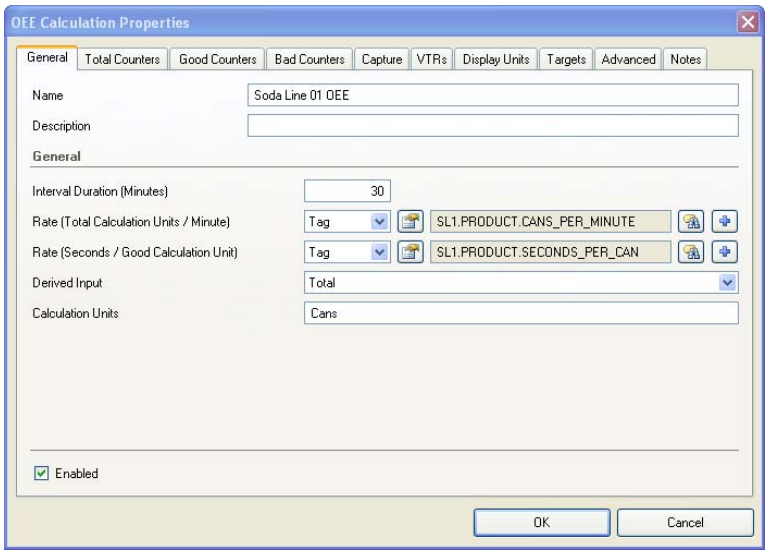
# Lab 10: Configuration Manager – OEE Calculations and OEE Counters

| | |
|---|---|
| **Objectives** | • Create OEE Calculations |
| **Estimated Time to Complete This lab** | 15 minutes |

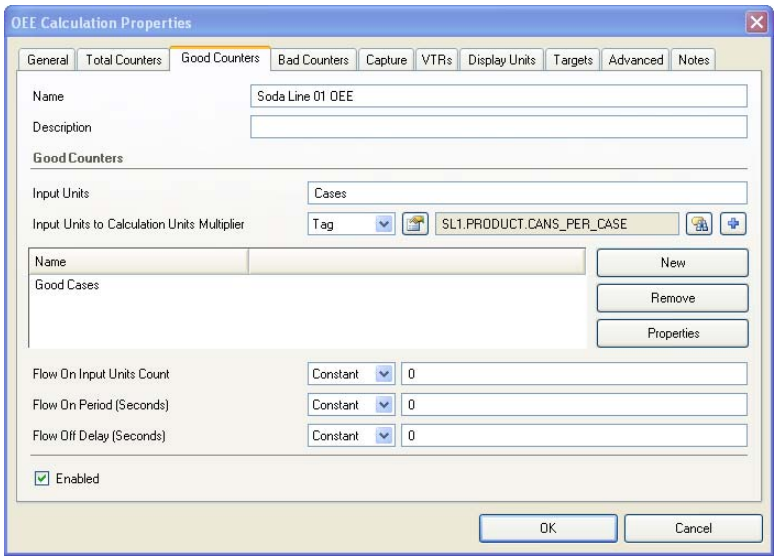
In this lab you will create special Tags and Counters to use in an OEE Calculation for your Soda Line. You will use this OEE Calculation for KPI reports in the next Lab.

| Tasks | Detailed Steps |
|---|---|
| Create Virtual Tags for Theoretical Rates | 1. Go to the **Tags** panel in the **Configuration Manager** tree view. Right-click the **Product** Tag Group and create the following **Virtual Tags**:<br><br>Name: **SL1.PRODUCT.CANS_PER_MINUTE**<br>Tag Group: **Product**<br>Data Type: **Integer**<br>Value: **360**<br><br>Name: **SL1.PRODUCT.SECONDS_PER_CAN**<br>Tag Group: **Product**<br>Data Type: **Float**<br>Value: **0.166**<br><br>Name: **SL1.PRODUCT.CANS_PER_CASE**<br>Tag Group: **Product**<br>Data Type: **Integer**<br>Value: **24** |
| Create OPC Tags for OEE Counters | 1. Create the following OPC Tags. Select **OEE Counters** for the **Tag Group** and **Integer** for the **Data Type**. Select **Soda Line 01 PLC** as the **Access Name**.<br><br>Tag Name: Item Name<br>**SL1.OEE.BAD_CANS.FILLER**: N7:1<br>**SL1.OEE.BAD_CANS.LABELER**: N7:2 |
| Create an OEE Calculation | 1. In the **Areas and Systems** panel of **Configuration Manager**, under the **Soda Line 01** Area, right-click the **Soda Line 01** System and select **New OEE Calculation** from the menu list.<br>2. In the **OEE Calculation Properties** page, go to the **General** tab and type **Soda Line 01 OEE** for the **Name**.<br>3. Type **5** for **Interval Duration (Minutes)**.<br>4. For the **Rate (Total Calculation Units / Minute)**, select **Tag** and then find and select **SL1.PRODUCT.CANS_PER_MINUTE**. |

5. For the **Rate (Seconds / Good Calculation Unit)** select **Tag** and the find and pick **SL1.PRODUCT.SECONDS_PER_CAN**.
6. For the **Derived Input**, select **Total**.
7. For the **Calculation Units**, type **Cans**.




8. In the **Good Counters** tab, type **Cases** for **Input Units**.
9. For **Input Units to Calculation Units Multiplier** select **Tag** and then find and select **SL1.PRODUCT.CANS_PER_CASE**.

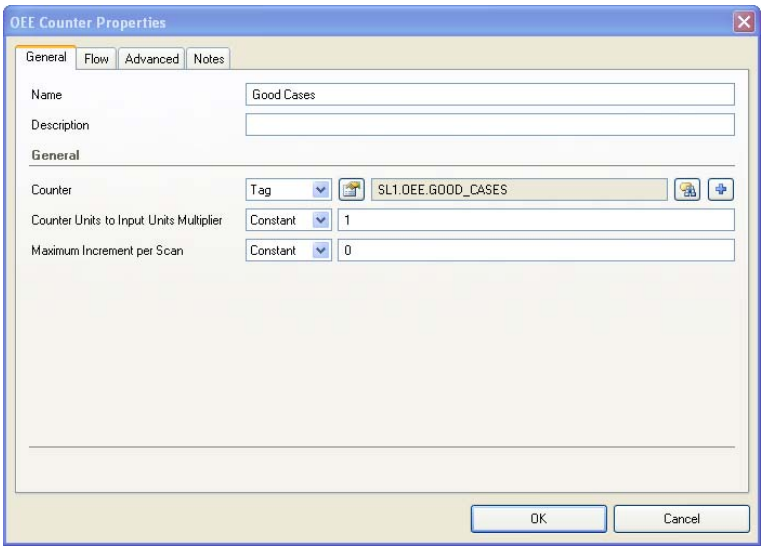



10. Click **New** to create a **Good Counter**. In the **OEE Counter Properties** page:

- Type **Good Cases** for the **Name**.
- Select **Tag** for the **Counter** and then find and

select the **SL1.OEE.GOOD_CASES** Tag.

- Select **Constant** for the **Counter Units to Input Units Multiplier** and type **1.**
- Click **OK**.




11. In the **Bad Counters** tab, type **Cans** for **Input Units**.
12. For the **Input Units to Calculation Units Multiplier**, select **Constant** and type **1** for the value.
13. Click **New** to create a **Bad Counter**. In the **OEE Counter Properties** page:

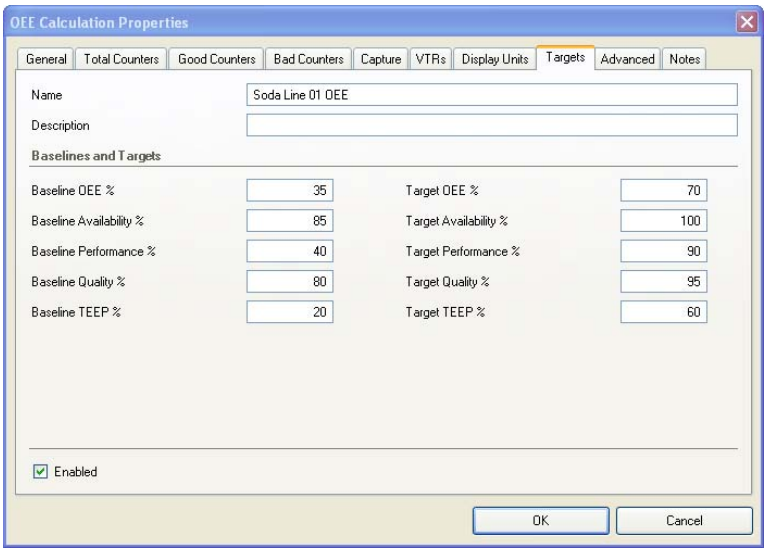
    - Type **Bad Cans for Filler** for the **Name**.
    - Select **Tag** for the **Counter** and then find and select the **SL1.OEE.BAD_CANS.FILLER** tag.
    - Select **Constant** for the **Counter Units to Input Units Multiplier** and type **1**.
    - Click **OK.**

14. Create another **Bad Counter** by clicking **New** and then in the **OEE Counter Properties** page:

    - Type **Bad Cans for Labeler** for the **Name**.
    - Select **Tag** for the **Counter** and then find and select the **SL1.OEE.BAD_CANS.LABELER** tag.
    - Select **Constant** for the **Counter Units to Input Units Multiplier** and type **1**.
    - Click **OK**.

15. Go to the **Target** tab and enter the following values for **Baselines and Targets**:

| Baselines | Value | Targets | Value |
|---|---|---|---|
| **Baseline OEE%** | **35** | **Target OEE%** | **70** |
| **Baseline Availability%** | **85** | **Target Availability%** | **100** |
| **Baseline Performance%** | **40** | **Target Performance%** | **90** |
| **Baseline Quality%** | **80** | **Target Quality%** | **95** |
| **Baseline TEEP%** | **20** | **Target TEEP%** | **60** |

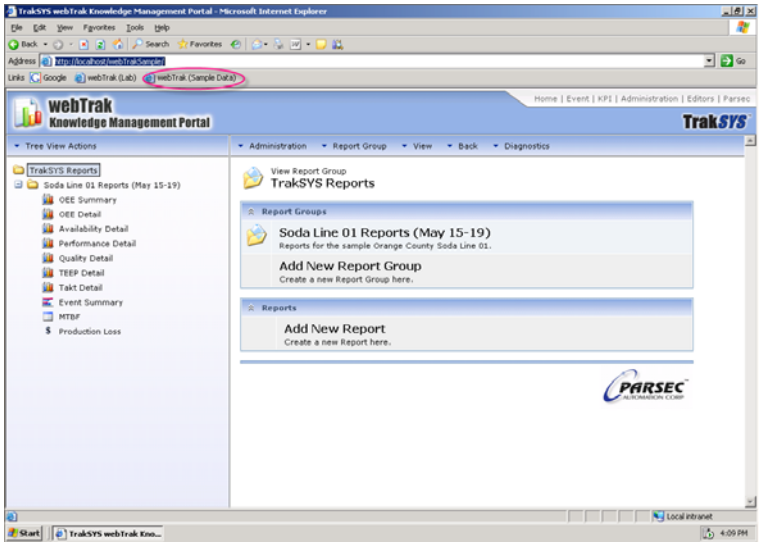


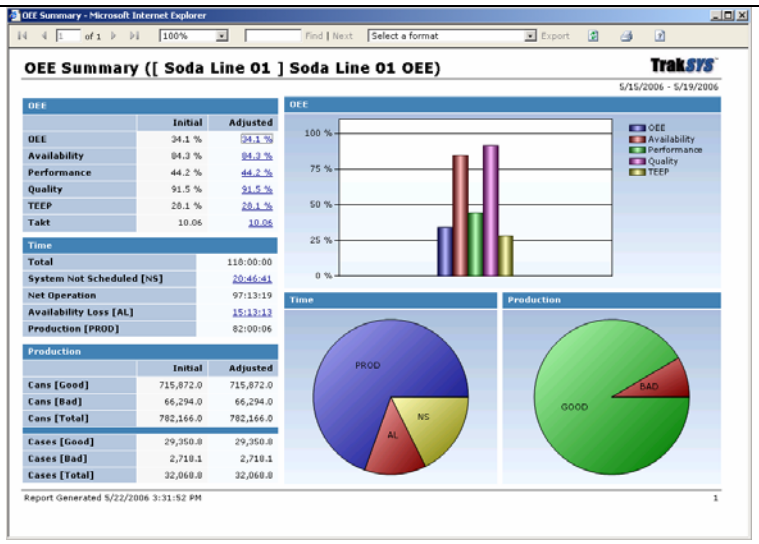

16. Click **OK** to save the OEE Calculation.
17. Restart **Logic Manager** to load the new configuration changes.

## Lab 11: webTrak – KPI Reports

| | |
|---|---|
| **Objectives** | • Examine different KPI reports |
| **Estimated Time to Complete This lab** | 15 minutes |

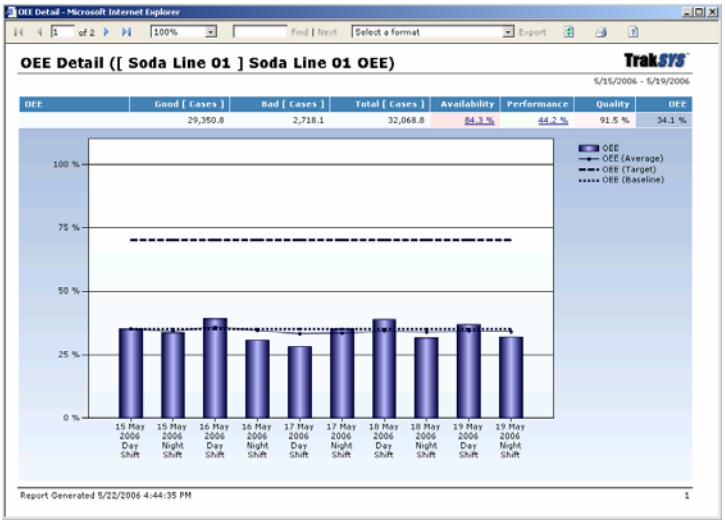
In this lab, you will open an OEE Summary sample report and other KPI Detail reports in webTrak.

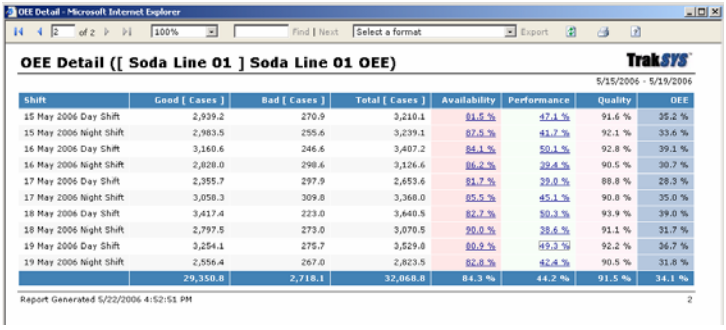
| Tasks | Detailed Steps |
|---|---|
| Open an OEE Summary Report | 1. Click on **webTrak (Sample Data)** link on your browser window.<br>  <br><br>2. In the TrakSYS Reports tree view, under **Soda Line 01 Reports (May 15-19)**, click the **OEE Summary** Report.<br>3. Notice the **OEE Calculation** is pre-selected for **[Soda Line 01] Soda Line 01 OEE**, and the **Start Date** and **End Date** are set to May 15, 2006 to May 19, 2006.<br>4. Click the **Open** button to View the report, which displays aggregate OEE and related KPI data for the selected date range. |




Open an OEE Detail Report

1. Under the same Report Group, open the **OEE Detail Report**.
2. Notice the report is grouped by **Shift**.
3. Click on any bar on the graph to view the second section of the report containing a tabular representation of the data.



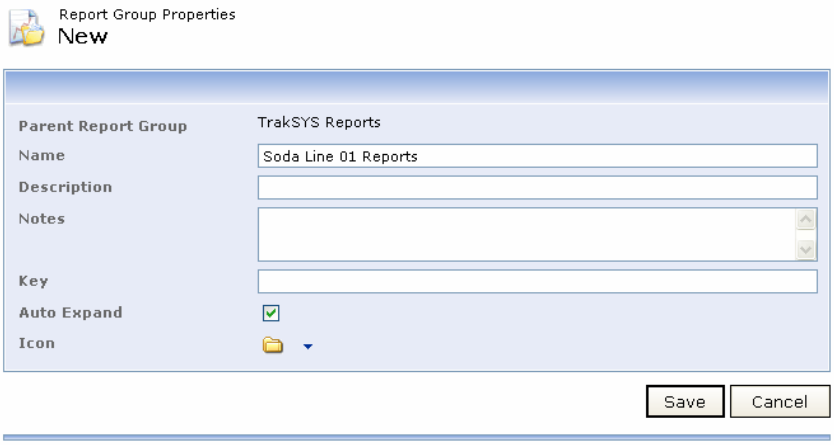



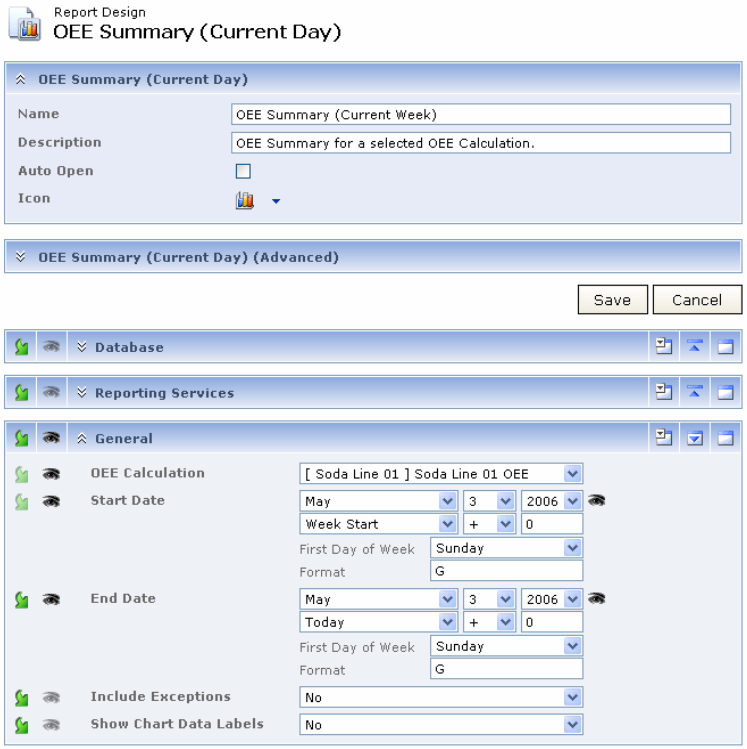
| | |
|---|---|
| Open other KPI Detail Reports | 1. Open the following KPI detail reports and drill through the following reports:<br>• **Availability Detail**<br>• **Performance Detail**<br>• **Quality Detail** |

## Lab 12: webTrak – Report Design

| | |
|---|---|
| **Objectives** | • Design reports with user-defined parameters |
| **Estimated Time to Complete This lab** | 20 minutes |

In this lab, you will use the Report Designer to design new reports with custom parameter settings. If you have just done the Lab 11, you need to go back to the TrakSYS webTrak.

| Tasks | Detailed Steps |
|---|---|
| Create a new Report Group | 1. Click on **webTrak (Lab)** link on your browser window if you still have **webTrak (Sample Data)** website open.<br>2. In the webTrak tree view, click the **TrakSYS Reports** group.<br>3. In the right window, under **Report Groups**, click **Add New Report Group**.<br>4. On the **Report Group Properties** page, type **Soda Line 01 Reports** for the **Name** of the new report group, check the **Auto Expand** checkbox, and select for the group's **Icon**.<br>5. Click **Save** button to save this **Report Group**.<br>  |
| Create New Reports | 1. Click the new **Soda Line 01 Reports** Group in the webTrak tree view.<br>2. On the **View Report Group** page, click **Add New Report**.<br>3. On **Select Report Type** page, click **OEE Summary**.<br>4. On the **Report Design** page:<br>a. Type **OEE Summary (Current Week)** for the **Name** of the Report.<br>b. Select the **[Soda Line 01] Soda Line 01 OEE** for **OEE Calculation**.<br>c. Select **Week Start** for the **Start Date**.<br>d. Select **Today** for the **End Date**.<br>e. Click the **Save** button to save this report. |




5. Add another new report to the **Soda Line 01** Report Group and select **System Event Summary (DateTime)** for the **Report Type**.
6. On the **Report Design** page:

    a. Type **System Event Summary (Current Week)** for the **Name** of the Report.
    b. Select **Soda Line 01** for the **Area.**
    c. Select **Soda Line 01** for the **System.**
    d. Select **Week Start** for the **Start Date.**
    e. Select **Today** for the **End Date.**
    f. Select **Pareto Chart by Duration** for the default **Display Type.**
    g. Click **Save** button to save this report.

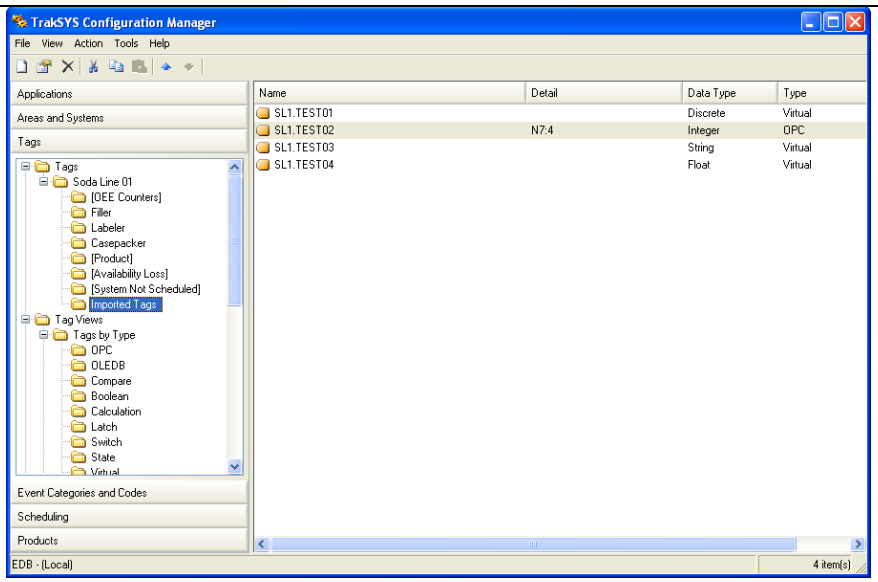
7. Click on and open each of the new reports to view them.

## Lab 13: Tag Import

| | |
|---|---|
| **Objectives** | • Use the TrakSYS Tag Import application to batch import Tags |
| **Estimated Time to Complete This lab** | 10 minutes |

In this Lab, you will use the TrakSYS Tag Import application to import Tags directly into the EDB database, without having to manually create the Tags in Configuration Manager.

<table>
<tr><th>Tasks</th><th>Detailed Steps</th></tr>
<tr><td>Open the Tag Import Template</td><td>1. Go to Start | All Programs | Parsec | TrakSYS | Import | Tag Import Template.</td></tr>
<tr><td>Create Tags in Import Template</td><td>1. Fill out the Excel Template with the following information about Tags:
<table>
<tr><th>Tag Group</th><th>Access Name</th><th>Tag Name</th><th>Data Type</th><th>Item Name</th><th>Default Value</th><th>Store</th></tr>
<tr><td>Soda Line 01\Imported Tags</td><td></td><td>SL1.TEST01</td><td>BOOL</td><td></td><td>0</td><td>1</td></tr>
<tr><td>Soda Line 01\Imported Tags</td><td>Soda Line 01 PLC</td><td>SL1.TEST02</td><td>INT</td><td>N7:4</td><td>4</td><td>1</td></tr>
<tr><td>Soda Line 01\Imported Tags</td><td></td><td>SL1.TEST03</td><td>STRING</td><td></td><td>25</td><td>1</td></tr>
<tr><td>Soda Line 01\Imported Tags</td><td></td><td>SL1.TEST04</td><td>FLOAT</td><td></td><td>1.3</td><td>1</td></tr>
</table>
2. Save the file as a CSV file by selecting the File | Save As menu option. Type TagImport1 for the File Name and select CSV (Comma Delimited) (*.csv) for the Save as type. Save the file to the Desktop. Click the Save button.<br>3. Close Microsoft Excel before importing Tags.</td></tr>
<tr><td>Import Tags</td><td>1. Go to Start | All Programs | Parsec | TrakSYS | Import | Tag Import.<br>2. Click the Browse button to find and select the TagImport1.csv file as the Tag Source File. Click the Next button.<br>3. When the Tag Import Completed message appears, click the Finish button.<br>4. To view more detailed results of the import, open the Log File saved on your desktop.</td></tr>
<tr><td>View Imported Tags</td><td>1. Close the Configuration Manager and re-open it.<br>2. Go to the Tags panel and expand the Soda Line 01 Tag group. There should be a new Tag Group called Imported Tags.<br>3. Click the Imported Tags Tag Group. You should see the 4 imported tags (one OPC and 3 Virtual Tags) in the right pane.</td></tr>
</table>


TrakSYS Configuration Manager
File View Action Tools Help
Applications
Areas and Systems
Tags
Tags
Soda Line 01
[OEE Counters]
Filler
Labeler
Casepacker
[Product]
[Availability Loss]
[System Not Scheduled]
Imported Tags
Tag Views
Tags by Type
OPC
OLEDB
Compare
Boolean
Calculation
Latch
Switch
State
Event Categories and Codes
Scheduling
Products
Name Detail Data Type Type
SL1.TEST01 Discrete Virtual
SL1.TEST02 N7:4 Integer OPC
SL1.TEST03 String Virtual
SL1.TEST04 Float Virtual
EDB - (Local)
4 item(s)