**Add Zero Production Count**

Taki Guan

# Version History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Author | Date | Changes |
| 1.0 | Taki Guan | 2019-4-1 | Create Document |
| 1.0 | Taki Guan | 2019-4-4 | Finish Document |
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Contents

[Version History 1](#_Toc4068331)

[Purpose 1](#_Toc4068332)

[Procedure 1](#_Toc4068333)

[Architecture 3](#_Toc4068334)

[Reference Link 6](#_Toc4068335)

# Purpose

This file is to describe how to add zero production count for specific line on specific shift.

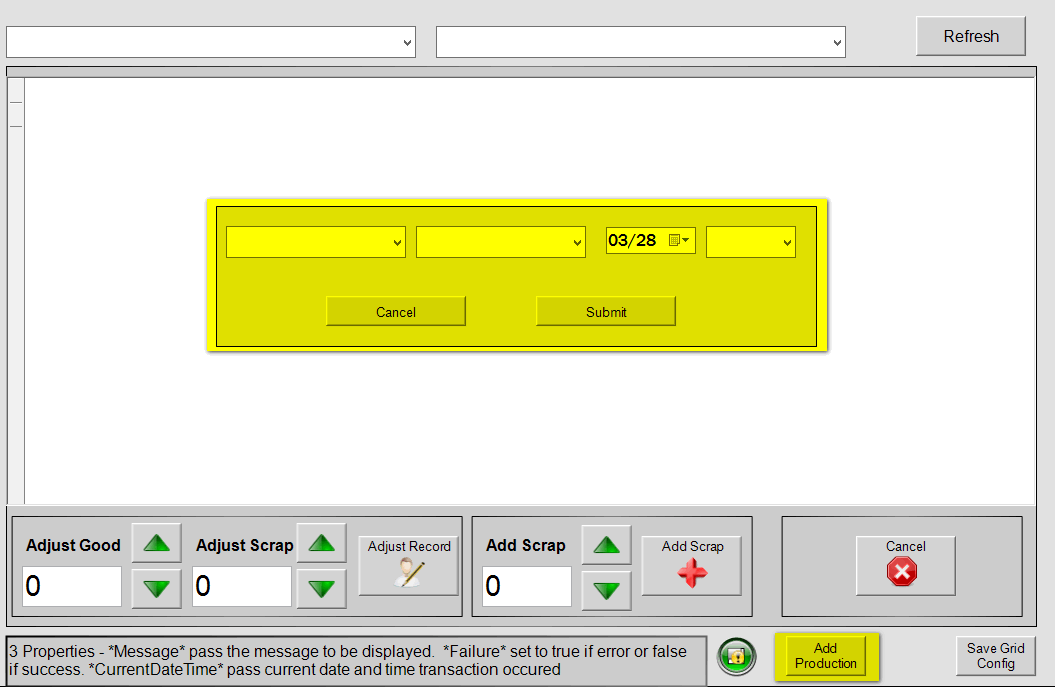
This file will help other developers to find the store procedure and batch code generation logic.

# Procedure

This function will help if system issue happens and no work order record in that shift. If I get the line name, work order, date and shift then I can insert 0 records to [job] and [item\_prod] table.

The operation sequence is as below:

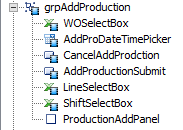
1. Operator open admin window;
2. Click “Production Reconcile” button;
3. Click “Add Production” button;
4. Select line, work order, date and shift to submit record;
5. Select specific line and work order and refresh to check if 0 records exist.

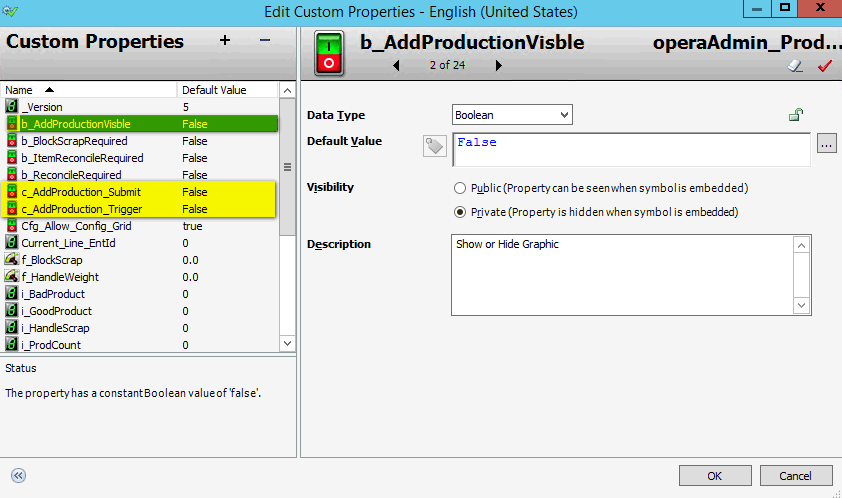


This graphic will appear after “Add Production” button clicked. Other graphic will be hided on background.

# Architecture

**[operaAdmin\_ProductionRecon\_SX]**





We need to create custom properties:

[b\_AddProductionVisble]

Make the add production graphic visible.

[c\_AddProduction\_Trigger]

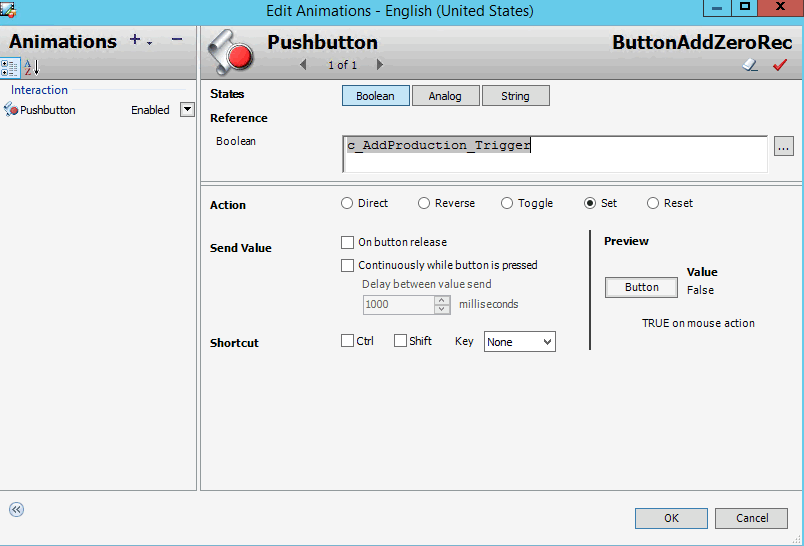
Initialize the add production graphic.

[c\_AddProduction\_Submit]

Submit and execute the store procedure.

After we create the graphic we need to design below logic to initialize the graphic.

I add one [Pushbutton] animation for “Add Production” button, when the button has been clicked, [c\_AddProduction\_Trigger] will be set to true. Then [Script\_AddProduction\_Initialize] will be executed.



**[Script\_AddProduction\_Initialize]**

*''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''*

*''''''''*

*' Script Name: Script\_AddProduction\_Initialize*

*' Expression: c\_AddProduction\_Trigger*

*' Trigger: OnTrue*

*'===================================================================================*

*' Author: Taki Guan <taki.guan@colpal.com>*

*' Creation Date: 2019-3-28*

*' Description: Initialize LineSelect Box and Shift Select Box*

*' Pre-condition:*

*' Post-condition:*

*'-----------------------------------------------------------------------------------*

*' Revision History:*

*' 000 - 2019-03-28 - Taki Guan <taki.guan@colpal.com>*

*' Initial Creation*

*''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''*

c\_AddProduction\_Trigger = false;

grpProdRecon.Visible = false;

grpProdRecon\_Injection.Visible = false;

grpProdRecon\_Packaging.Visible = false;

b\_AddProductionVisble = true;

*'Initialize LineSelectBox*

dim xmlBuilder As Fact.Common.XMLReadBuilder;

dim Result As aaFactMES.Result;

dim dataSet As System.Data.DataSet;

dim row As System.Data.DataRow;

dim clientSession As aaFactMES.aaClientSession;

dim messageText as string;

dim doc as System.Xml.XmlDocument;

dim msgNode as System.Xml.XmlNode;

dim displayString as string;

doc = new System.Xml.XmlDocument();

doc.Load(MyPlatform.Cfg.DictionaryFilePath);

result = aaFactMES.aaClientSession.GetInstance();

clientSession = result.Value;

*'Lookup the line information*

xmlBuilder = Fact.Common.XMLReadBuilder("OPERA\_GetEntsByType", "GetByKey");

xmlBuilder.AddFilter("entity\_type", "Line");

result = clientSession.GetDS(xmlBuilder.Xml);

if Result.Success then

    dataSet = result.Value;

    grpAddProduction.LineSelectBox.Items.Clear();

    grpAddProduction.LineSelectBox.Items.Add("");

    For Each row in dataSet.Tables(0).Rows

        grpAddProduction.LineSelectBox.Items.Add(row.Item("ent\_name"));

    Next;

else

    msgNode = doc.SelectSingleNode("OPERA\_Messages/ScreenName[@Name='operaAdmin\_ProductionReconcile']/ErrorMessages/Message[@Name='Initialize\_Fail']/Language[@ID='" + InTouch:$Language + "']");

    messageText = msgNode.InnerText + Result.Exception.Message.ToString();

    LogMessage(messageText);

    System.Windows.Forms.MessageBox.Show(messageText, "Initialization Failure", System.Windows.Forms.MessageBoxButtons.OK, System.Windows.Forms.MessageBoxIcon.Error);

endif;

*'Initialize date time picker*

grpAddProduction.AddProDateTimePicker.Value = System.DateTime.Now.Date;

*'Initialize ShiftSelectBox*

grpAddProduction.ShiftSelectBox.Items.Clear();

grpAddProduction.ShiftSelectBox.Items.Add("Shift1");

grpAddProduction.ShiftSelectBox.Items.Add("Shift2");

grpAddProduction.ShiftSelectBox.Items.Add("Shift3");

**[Script\_AddProduction\_Submit]**

*'''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''*

*' Script Name: Script\_AddProduction\_Submit*

*' Expression: c\_AddProduction\_Submit*

*' Trigger: OnTrue*

*'===================================================================================*

*' Author: Taki Guan <taki.guan@colpal.com>*

*' Creation Date: 2019-3-28*

*' Description: The update and selection logic after submit button clicked*

*' Pre-condition:*

*' Post-condition:*

*'-----------------------------------------------------------------------------------*

*' Revision History:*

*' 000 - 2019-03-28 - Taki Guan <taki.guan@colpal.com>*

*' Initial Creation*

*' 001 - 2019-04-01 - Taki Guan <taki.guan@colpal.com>*

*' If succesful then close the button*

*''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''*

c\_AddProduction\_Submit = false;

*' Variable Definition*

dim result as aaFactMES.Result;

dim clientSession as aaFactMES.aaClientSession;

dim sqlQuery as string;

*' lineEntName and eqEntName is for query*

dim ent\_name as string;

dim lineEntName as string;

dim eqEntName as string;

dim wo\_id as string;

dim date as time;

dim queryDate as time;

dim shift as string;

dim user\_id as string;

ent\_name = grpAddProduction.LineSelectBox.Text;

wo\_id = grpAddProduction.WOSelectBox.Text;

date = grpAddProduction.AddProDateTimePicker.Value;

shift = grpAddProduction.ShiftSelectBox.Text;

user\_id = InTouch:MES\_Cur\_User;

*' set lineEntName and eqEntName base on differenct line type*

if ent\_name.StartsWith("H2FCS") then

    lineEntName = ent\_name;

    eqEntName = ent\_name + "\_FCS";

elseif ent\_name.StartsWith("T2BH") then

    lineEntName = ent\_name;

    eqEntName = ent\_name + "\_END";

elseif ent\_name.StartsWith("P2HA") then

    lineEntName = ent\_name;

    eqEntName = ent\_name + "\_HoongA";

endif;

*' queryDate is a comnination of date and shift*

if shift == "Shift1" then

    queryDate = date;

elseif shift == "Shift2" then

    queryDate = date.AddHours(8);

elseif shift == "Shift3" then

    queryDate = date.AddHours(16);

endif;

try

*' Collect local session data*

    result = aaFactMES.aaClientSession.GetInstance();

    clientSession = result.Value;

*' Start session if it doesn't exist*

    if clientSession.SessionId == -1 then

        clientSession.StartSession(aaFactMES.aaClientTypes.clientOperator);

    endif;

    if clientSession.SessionId <> -1 then

        sqlQuery = System.String.Format("sp\_I\_OPERA\_AddZeroRecord '{0}','{1}','{2}','{3}','{4}'", user\_id, queryDate, lineEntName, eqEntName, wo\_id);

        LogMessage("sqlQuery: " + sqlQuery);

*' Retrieve DataSet using MES API*

        result = clientSession.GetDSbySQL(sqlQuery);

        if result.Success then

            LogMessage("Add Zero Count Successful!");

            ngsfrErrorDisplay1.Message = "Add Zero Count Successful!";

            ngsfrErrorDisplay1.Failure = false;

*' Set Visible to false*

            b\_AddProductionVisble = false;

            if LineType == "Injection" then

                grpProdRecon\_Injection.Visible = true;

                grpProdRecon\_Packaging.Visible = false;

                grpProdRecon.Visible = false;

            elseif LineType == "Packaging" then

                grpProdRecon\_Packaging.Visible = true;

                grpProdRecon\_Injection.Visible = false;

                grpProdRecon.Visible = false;

            else

                grpProdRecon.Visible = True;

                grpProdRecon\_Packaging.Visible = false;

                grpProdRecon\_Injection.Visible = false;

            endif;

        else

            LogError("Add Zero Count Error: " + result.Exception.Message);

            ngsfrErrorDisplay1.Message = "Add Zero Count Failed!";

            ngsfrErrorDisplay1.Failure = true;

        endif;

    endif;

catch

endtry;

Then I need to add a store procedure to MESDB. Execute current script to add below store procedure.

**[sp\_I\_OPERA\_AddZeroRecord]**

Below attributes are transfer to this store procedure to execute.

|  |  |
| --- | --- |
| @userID | OPERA User |
| @shiftTime | Date time to add record |
| @lineEntName | Line name to add record |
| @equEntName | Equipment name to add record |
| @woID | Work Order ID |

USE [MESDB]

GO

*/\*\*\*\*\*\* Object: StoredProcedure [dbo].[sp\_I\_OPERA\_AddZeroRecord] Script Date: 2019/4/2 11:31:21 \*\*\*\*\*\*/*

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

*-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**

*-- Module Name          - sp\_I\_OPERA\_AddZeroRecord*

*-- Description          -   Add Zero Record*

*-- Author               -   Taki Guan*

*-- Date Created         -   2019/3/29*

*-- Version              - 0.0.0*

*--*

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*-- PARTICULAR PURPOSE.*

*----------------------------------------------------------------------------------------------------------------------------*

*-- Date\_Modified    Modified\_By     Ver         Changes*

*-- 2019/3/29        Taki Guan       0.0.0       Initial Creation*

*--*

*----------------------------------------------------------------------------------------------------------------------------*

*-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**

CREATE PROCEDURE [dbo].[sp\_I\_OPERA\_AddZeroRecord]

(

    @userID AS nvarchar(40),

    @shiftTime AS datetime,

    @lineEntName AS nvarchar(40),

    @equEntName AS nvarchar(40),

    @woID AS nvarchar(40)

)

AS

BEGIN

    BEGIN TRANSACTION;

    declare @sessID int,@lineEntID int,@eqEntId int,@itemID nvarchar(40),@seqNO int,@qty float,@operID nvarchar(20),@shiftID int

    select top 1 @sessID=session\_id from sessn where std\_time=0

*-- set @userID='MF\Taki Guan'*

*-- set @lineEntID=187*

*-- set @eqEntId=190*

*-- select top 1 @lineEntID=ent\_id from ent where ent\_name='H2FCS904'*

*-- select top 1 @eqEntId=ent\_id from ent where ent\_name='H2FCS904\_FCS'*

    select top 1 @lineEntID=ent\_id from ent where ent\_name=@lineEntName

    select top 1 @eqEntId=ent\_id from ent where ent\_name= @equEntName

*-- select top 1 @lineEntID=ent\_id from ent where ent\_name='P2HA6015'*

*-- select top 1 @eqEntId=ent\_id from ent where ent\_name='P2HA6015\_HoongA'*

*-- set @woID='000' + '102094897'*

*-- set @woID= '000102087677'*

*-- set @shiftTime='2019-03-26 16:00:00'*

    set @qty=0

    select top 1 @itemID=item\_id from wo where wo\_id=@woID

    if @itemID is not null

    begin

        select top 1 @seqNO=seq\_no,@operID=oper\_id

        from job where wo\_id=@woID and target\_sched\_ent\_id=@eqEntId order by seq\_no desc

*--*

        declare @lineProdRate float,@eqProdRate float

        declare @varQtyReqd float,@varBatchSize float,@varProdUom int

        set @lineProdRate=dbo.fn\_GetProdRate(@lineEntID,@itemID)

        set @eqProdRate=dbo.fn\_GetProdRate(@eqEntId,@itemID)

        select top 1 @varQtyReqd=qty\_reqd,@varProdUom=prod\_uom from job where wo\_id=@woID and seq\_no=0

        update job set batch\_size=@lineProdRate where wo\_id=@woID and seq\_no=0

*--*

        if @seqNO is null

        begin

            select top 1 @seqNO=max(seq\_no) from job where wo\_id=@woID

            if @seqNO is not null

            begin

                set @seqNO=@seqNO+1

                set @operID='10'

                set @varQtyReqd=round(@varQtyReqd\*@eqProdRate\*1.0/@lineProdRate,2)

                set @varBatchSize=round(@eqProdRate,2)

                exec sp\_i\_job @woID,@operID,@seqNO,@operID,@itemID,2,1,null,null,@eqEntId,@eqEntId,@eqEntId,@varQtyReqd,0,0,0,0,@varQtyReqd,-0.01,1,@varBatchSize,0,0,0,0,null,null,null,null,1,@varProdUom,null,null,null,null,null,null,null,null,null,null,null,0,null,0,0,null,null,null,null,@seqNO,null,0,null,null,null,null,null,null,null,null,1,null

            end

        end

        if @seqNO is not null and @seqNO>0

        begin

            select top 1 @shiftID=shift\_id

            from shift\_history where shift\_start\_local<=@shiftTime and shift\_end\_local>@shiftTime

            update job set act\_start\_time\_local=isnull(act\_start\_time\_local,getdate()),

                state\_cd =case when state\_cd<4 then 4 else state\_cd end,

                run\_ent\_id=ISNULL(run\_ent\_id,target\_sched\_ent\_id)

            where wo\_id=@woID

            exec sp\_I\_Item\_Prod\_AddProdPostExecExt @sessID,@userID,@eqEntId,@qty,@woID,@operID,@seqNO,@shiftTime,@shiftTime,@shiftID,@itemID,2

            exec sp\_I\_Item\_Prod\_AddProdPostExecExt @sessID,@userID,@lineEntID,@qty,@woID,@operID,0,@shiftTime,@shiftTime,@shiftID,@itemID,2

        end

    end

COMMIT TRANSACTION;

END;

GO

# Reference Link