

## [Tech Note 748](#)

# Using Utilization Control Buttons for Wonderware MES

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## Introduction

This *Tech Note* describes the functionality of Utilization buttons in the button bar that are linked to the Utilization Control. The Utilization Control can be used from out-of-the-box with Wonderware MES Operator/Util/OEE, or by customizing the control using the .NET Client Control in Archestra Graphics (**FactMES.Controls.Utilization.dll**)

## Application Versions

- Wonderware Factelligence/Operations and Performance 3.x
- MES 4.0

This *Tech Note* describes the functionality of the buttons in the button bar for these versions.

## Utilization Control Buttons and Configuration Options

Figure 1 (below) shows the out-of-the-box Utilization Control UI.

Wonderware MES Operator-admin

## Job Summary: Filler\_001

Current User: admin

Wonderware MES

W/D ID	Oper ID	Part Number	Start Qty	Reqd Qty
Job State	Job Desc	Part Desc	Batch Size	Good Qty
Machine Status <b>RUNNING</b>	W/D Desc	Reqd By	Estimated Finish	Reject Qty

Notes

Route | **Work Queue** | Production | BOM | Genealogy | **Uptime/OEE** | Folders | Steps | Specs | Audit

Event Start Time (UTC)	Event Start Time (Local)	Entity Name	Shift Desc	State Desc	Reason Desc	Duration	Reason Pending	Runtime
2/3/2011 5:25:13 PM	2/4/2011 6:25:13 AM	Filler_001	No Shift	RUNNING	Running	00:18:09	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2/3/2011 4:01:00 AM	2/3/2011 5:01:00 PM	Filler_001	No Shift	<b>DOWN</b>	<b>Unknown Stop</b>	13:24:13	<input type="checkbox"/>	<input type="checkbox"/>

Current Filter: Filter Type := Current Shift; Event State := Both; Minimum Duration := 0; Status := All

Current Status

Current Reason	Since	Duration (hh:mm:ss)	Good Qty	Reject Qty
		00:18:09		
Current State	Reason from I/O	Current OEE %	Target OEE %	
		0.00	0.00	

Control Buttons: [Icons for various actions]

FIGURE 1: OUT-OF-THE-BOX UTILIZATION CONTROL

Figure 2 (below) shows the customization using ArchestrA Graphics in InTouch®.

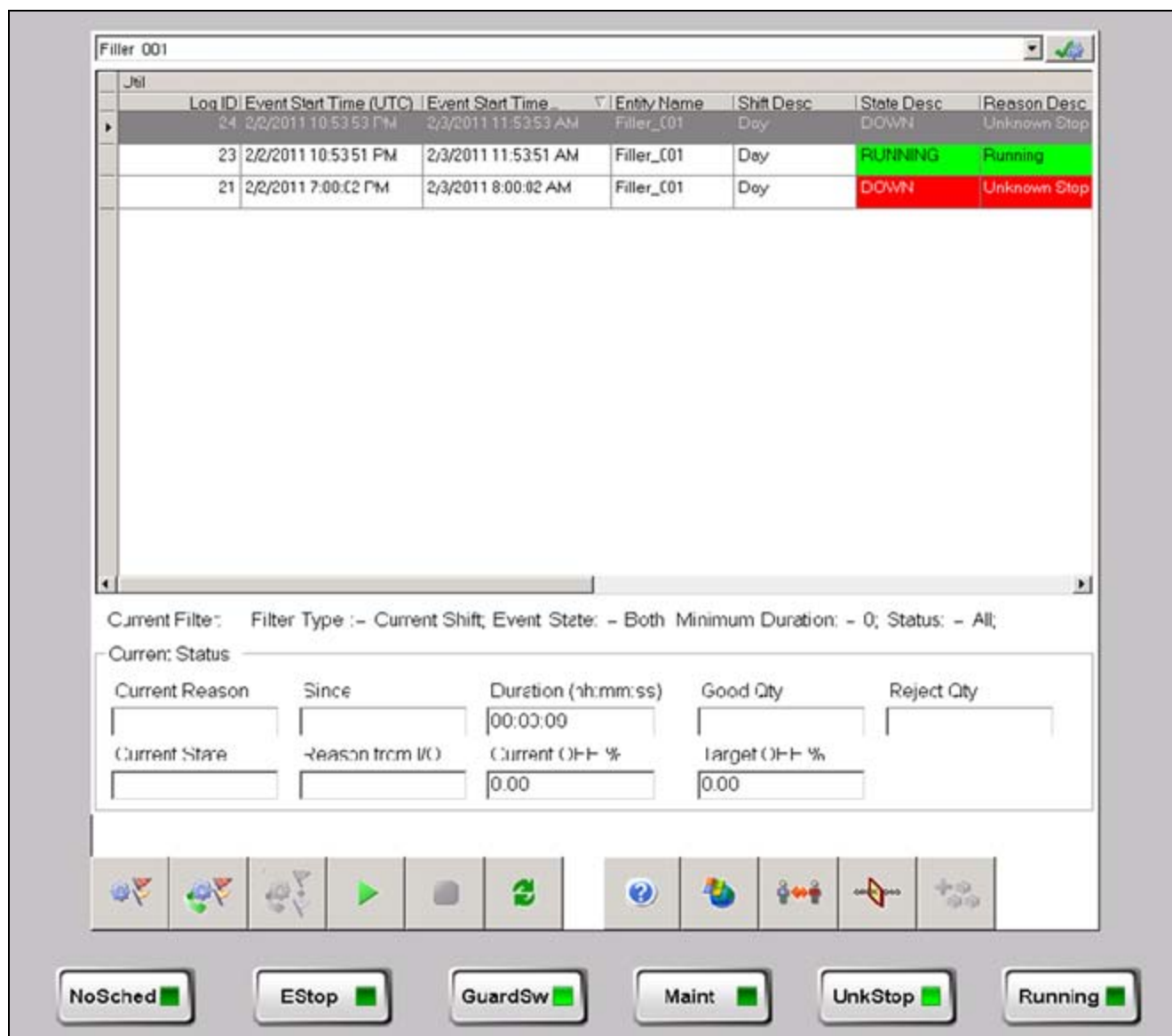


FIGURE 2: ARCHESTR A GRAPHICS IN INTOUCH WINDOW

The button bar at the bottom of the UI has three buttons for Utilization Control (first three buttons from the left). The buttons are shown in Figure 1 and Figure 2 (above).

### Functionality of the Three Buttons

1. **Enter reason for selected machine:** This button lets you select a reason from a list of available reasons (Figure 3 below). It is important to note that this will show all available reason groups. In addition, once the reason is selected from the interface, this

reason does *not* get updated in the UCO.

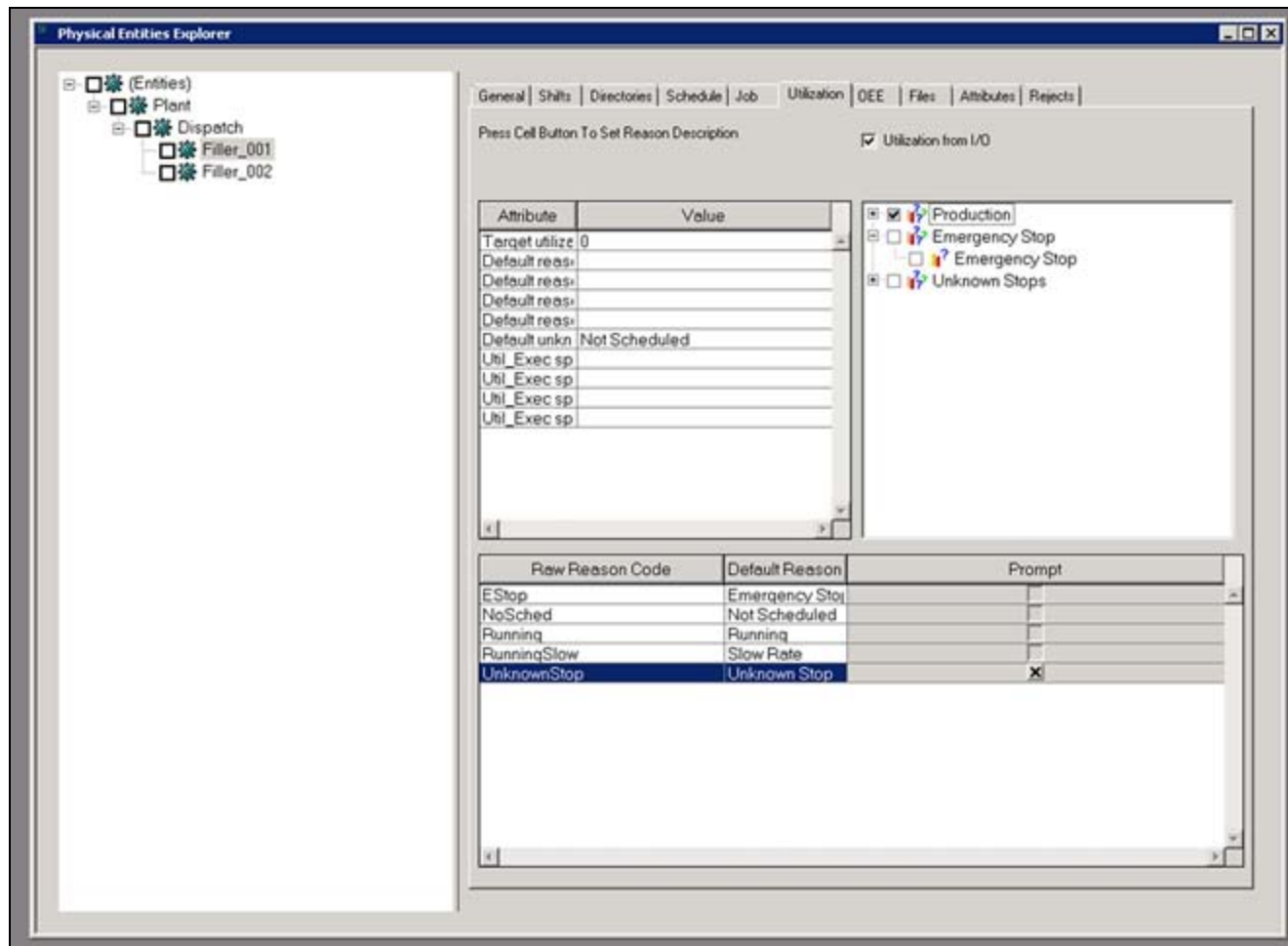
FIGURE 3: REASON CODE FOR SELECTED MACHINE

2. **Enter reason required for selected util record:** This button is disabled by default as shown in Figure 1 (above). The button is enabled (and Button 3 disabled) when the Event has the **Reason Pending** option enabled.

This button lets you update the pending record in the **util\_log** table and in the interface. See the **Reason Pending** column in Figure 1 (above).

When you enable the prompt in Configurator for a **Raw Reason Code** as shown in Figure 4 (below), it triggers **Reason Pending**.

**Note:** Reason Pending can also be configured from the UCO configuration editor. See the [UCO Configuration Options](#) section at the end of this *Tech Note*.



**FIGURE 4: CONFIGURATOR RAW REASON CODE CONFIGURATION OPTIONS**

**Note:** This button will only show the allowable reasons that are configured as shown in Figure 5 (below).

Enter reason for selected machine

Reason Group

- Production

Reason

- Unknown
- Unknown Stop

Since: 2/4/2011 7:15:15 AM

Duration (hh:mm:ss) 00:00:08

Comments

OK Cancel

FIGURE 5: CONFIGURED REASONS FOR A SELECTED MACHINE

3. **Edit final reason for selected util record:** This button lets you **modify** the reason for a selected util record. This field shows *all* available reasons as shown in Figure 6 (below).

**Edit final reason for selected machine**

Reason Group

- Production
- Emergency Stop
- Unknown Stops

Reason

- Unknown
- Running
- Not Scheduled
- Slow Rate
- Unknown Stop

Since: 2/4/2011 7:15:15 AM

Duration (hh:mm:ss) 00:25:01

Comments: This is unknown stop reason don't know

OK Cancel

**FIGURE 6: MODIFY SELECTED REASON**

This updates the record in **util\_log** table but does not generate a new record. Figure 7 (below) shows the contents from the **util\_log** table.

event_time_utc	event_time_local	ent_id	shft_id	shft_start_utc	shft_start_local	state_cd	reas_cd	reas_pending	runtime	downtime	setup_time	lead_downtime	bus_time	var_time	failure	duration
2011-01-31 21:51:54.000	2011-02-01 09:51:54.000	3	0	2011-01-31 22:15:52.000	2011-02-01 10:15:52.000	1	1	0	1	0	0	0	0	0	0	4802
2011-01-31 23:11:56.000	2011-02-01 11:11:56.000	3	0	2011-01-31 22:15:52.000	2011-02-01 10:15:52.000	0	3	0	0	1	0	0	0	0	0	82579
2011-02-01 00:04:22.000	2011-02-01 12:04:22.000	4	0	2011-02-01 01:03:56.000	2011-02-01 13:03:56.000	1	1	0	1	0	0	0	0	0	0	407
2011-02-01 00:11:09.000	2011-02-01 12:11:09.000	4	0	2011-02-01 01:03:56.000	2011-02-01 13:03:56.000	0	3	0	0	1	0	0	0	0	0	79123
2011-02-01 22:08:15.000	2011-02-02 11:08:15.000	3	0	2011-01-31 21:15:52.000	2011-02-01 10:15:52.000	0	7	0	0	1	0	0	0	0	0	96
2011-02-01 22:09:51.000	2011-02-02 11:09:51.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	0	8	0	0	1	0	0	0	0	0	250
2011-02-01 22:09:52.000	2011-02-02 11:09:52.000	4	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	0	3	0	0	1	0	0	0	0	0	21069
2011-02-01 22:14:01.000	2011-02-02 11:14:01.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	3	5	0	1	0	0	0	0	0	0	2206
2011-02-01 22:50:47.000	2011-02-02 11:50:47.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	3	5	0	1	0	0	0	0	0	0	41
2011-02-01 22:51:28.000	2011-02-02 11:51:28.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	1	1	0	1	0	0	0	0	0	0	65
2011-02-01 22:52:33.000	2011-02-02 11:52:33.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	4	0	0	0	1	0	0	0	0	0	1305
2011-02-01 23:15:38.000	2011-02-02 12:15:38.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	0	7	0	0	1	0	0	0	0	0	730
2011-02-01 23:27:48.000	2011-02-02 12:27:48.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	1	1	0	1	0	0	0	0	0	0	1585
2011-02-01 23:54:13.000	2011-02-02 12:54:13.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	2	2	0	0	0	0	0	0	0	0	244
2011-02-01 23:58:17.000	2011-02-02 12:58:17.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	1	1	0	1	0	0	0	0	0	0	66
2011-02-01 23:59:23.000	2011-02-02 12:59:23.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	0	6	0	0	1	0	0	0	0	0	125
2011-02-02 00:01:28.000	2011-02-02 13:01:28.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	2	2	0	0	0	0	0	0	0	0	335
2011-02-02 00:07:03.000	2011-02-02 13:07:03.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	0	6	0	0	1	0	0	0	0	0	14037
2011-02-02 04:01:00.000	2011-02-02 17:01:00.000	3	1	2011-02-01 19:00:00.000	2011-02-02 08:00:00.000	0	6	0	0	1	0	0	0	0	0	1
2011-02-02 04:01:01.000	2011-02-02 17:01:01.000	3	0	2011-02-02 04:01:00.000	2011-02-02 17:01:00.000	0	6	0	0	1	0	0	0	0	0	53941
2011-02-02 04:01:01.000	2011-02-02 17:01:01.000	4	0	2011-02-02 04:01:00.000	2011-02-02 17:01:00.000	0	3	0	0	1	0	0	0	0	0	53941
2011-02-02 19:00:02.000	2011-02-03 08:00:02.000	3	1	2011-02-02 19:00:00.000	2011-02-03 08:00:00.000	0	6	0	0	1	0	0	0	0	0	14029
2011-02-02 19:00:02.000	2011-02-03 08:00:02.000	4	1	2011-02-02 19:00:00.000	2011-02-03 08:00:00.000	0	3	0	0	1	0	0	0	0	0	32456
2011-02-02 22:53:51.000	2011-02-03 11:53:51.000	3	1	2011-02-02 19:00:00.000	2011-02-03 08:00:00.000	1	1	0	1	0	0	0	0	0	0	2
2011-02-02 22:53:53.000	2011-02-03 11:53:53.000	3	1	2011-02-02 19:00:00.000	2011-02-03 08:00:00.000	4	0	0	0	1	0	0	0	0	0	18427
2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	3	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	0	6	0	0	1	0	0	0	0	0	48253
2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	4	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	0	3	0	0	1	0	0	0	0	0	53281
2011-02-03 17:25:13.000	2011-02-04 06:25:13.000	3	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	1	1	0	1	0	0	0	0	0	0	2126
2011-02-03 18:00:35.000	2011-02-04 07:00:35.000	3	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	2	2	0	0	0	0	0	0	0	0	23
2011-02-03 18:01:02.000	2011-02-04 07:01:02.000	3	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	4	0	0	0	1	0	0	0	0	0	158
2011-02-03 18:03:40.000	2011-02-04 07:03:40.000	3	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	2	2	0	0	0	0	0	0	0	0	21
2011-02-03 18:04:01.000	2011-02-04 07:04:01.000	3	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	4	0	0	0	1	0	0	0	0	0	651
2011-02-03 18:14:52.000	2011-02-04 07:14:52.000	3	0	2011-02-03 04:01:00.000	2011-02-03 17:01:00.000	2	2	0	0	0	0	0	0	0	0	23

FIGURE 7: UTIL\_LOG TABLE DATA

## UCO Configuration Options

You can configure the same option in the UCO by checking the **Prompt** option in the **Raw Reason Code** field and syncing with the MES database via the Entity Model Builder. Events can also come from the UCO communicating to Middleware. Figure 8 (below) shows configuration options for Raw Reason Codes in the UCO object editor.

**Note:** The UCO is supported by Operations and Performance 3.5 and MES 4.0.



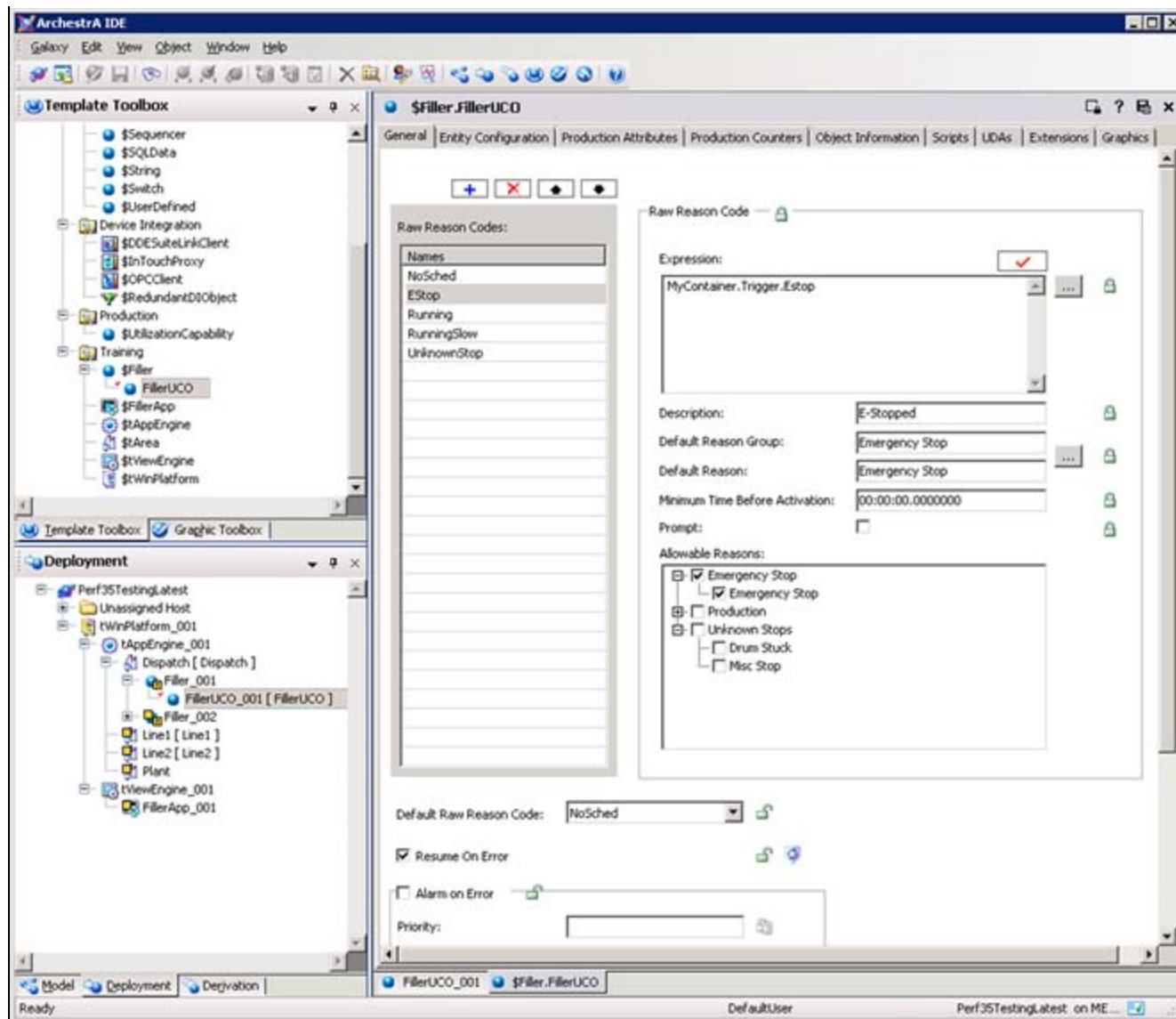


FIGURE 8: RAW REASON CODE CONFIGURATION OPTIONS IN UCO

## Summary

When working with the Utilization Control, the following items should be noted:

- If a reason is updated in interface, a UCO *does not* sync up with this event.
- If there are any discrepancies with start and end times related to timezones, please contact [Wonderware Technical Support](#) to evaluate the scenario and to see if Hotfix **2359** can be applied.

- An Enhancement Request will be in place to show only allowable reasons when Button 3 is selected.

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