

PROFICY® SOFTWARE & SERVICES

ORCHESTRATION HUB

User Guide



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Overview

The manufacturing industry, especially process manufacturing, is constantly trying to differentiate and innovate with an intent to maintain and grow their consumer base. This drives the need for constant innovation which introduces a high degree of variability in the daily manufacturing process. Most of the manufacturing customers struggle to manage this variability effectively and that becomes a cause for inefficiencies in their production. The greater the number of products and/or regulatory standards that these manufacturing facilities have to deal with, the larger the problem of being out of synch with the latest product manufacturing information.

Introduction

Proficy Orchestration Hub enables manufacturing customers to stay in synch with the constant updates to product manufacturing information. The solution provides out-of-the-box tools to unify product manufacturing information from disparate data systems like ERP and PLM, transforms and organizes this raw business-oriented information into production-ready formats like recipes and specifications, and orchestrates the information across the customer's factory floor systems at a single site or multiple facilities.

Proficy Orchestration Hub 2023 focuses on the first foundational theme of Manufacturing Product Data Management (mPDM). The 2023 release of Orchestration Hub focuses on the following customer problems to solve: production delays, errors and rework due to lack of up-to-date product data in production systems; quality variability due to ad-hoc modifications and lack of visibility into the cause of modifications; and the inability to reduce non-productive time due to manual efforts trying to execute standard production work

Conceptual Overview

The primary functional objective of Orchestration Hub software is to have a platform that allows you to integrate Level4 systems like ERP, PLM, SAP, ORACLE etc., with Level2 systems like Plant Applications, iFIX, CIMPLICITY and Batch, so that they can synchronize with the latest / updated manufacturing data (classified as master data) available in the L4 systems with that in the L2 systems. One of the primary success criteria for Orchestration Hub software is to be independently installable and configurable and to be able to connect with any kind of L4 and L2 systems supporting multiple protocols for connection (SOAP/REST/ODATA/Native SQL, etc.), without major development work.

Design Flow



The following figure details the design/flow/route of Orchestration Hub.

L4 Systems

Under the L4 system, any update on a new product introduction or update on existing products and has L4 application approval comes to Orchestration Hub.

Orchestration Hub

Orchestration Hub catches the new entry using the L4 Connector, and then the same goes to our application with all the logs, detailed view of our recipe/specifications if the variance is approved and then accepted the changes go to the MES/Plant Applications native client.

L2 Systems

In the L2 System, Plant Applications approves change reports directed towards the MES/Plant Applications data connector and then lands in the Plant Applications database.

Orchestration Hub Flow

Step 1

As a Plant Overseer/Supervisor, launch the given URI of Application after being alerted about changes to Product Master Data: https://decibel.po/uaa/login

	GE Digital
	Welcome!
	User Identifier
	Password
	SIGN IN
Copyrig	sht © General Electric Company 2021. All Rights Reserved.

Step 2

Enter the accurate required credentials to get access to the Application.

User Identifier: <<Valid User>>

Password: - <<Valid Password>>

GE Digital
Welcome!
comxclient
••••
SIGN IN

Enterprise View Flow

Step 1

When the application launches, you should see all 3 Grids: Expiration, New Products and current Products Updates.

8	Orch	estration Hub							Comxclient	Ð
ሐ		✓ New Products (2)	1)							
₩									Q Search	
°		STATUS	CHANGE TYPE	PRODUCT V	LOCATION	¥	PRODUCT FAMILY		ACTION	
>		O Approved	New Product	Dark Chocolate	New Yor	k	Select a Family	/	✓ Add	
		✓ Expiration (1)								
									Q Search	
		STATUS 🛛	CHANGE TYPE T	SPEC NAME T	SPEC NUMBER T	PRODUCT ID Y	EXPIRATION DATE	LOCATION V	ACTION	
		 Inactive 	Recipe	White Chocolate	5012833-002	12572	09/23/2021	New York	Update	
		✓ Product Update	s (1)							
									Q Search	
		STATUS Y	CHANGE TYPE Y	PRODUCT FAMILY	PRODUCT V		PRODUCT ID Y	LOCATION V	ACTION	
		O Approved	Recipe/Spec	External-Product	White Chocolate		12572	New York	Review	

On the home page, if you identify that the Expiration Date of Spec needs to get updated, click the Update button. A message box appears. Click Accept to continue. Upon a successful update the "Expiration Date Updated Successfully "message appears.

) C	Drchestration Hub							Comxclient	Ð
	✓ New Products (1)							
								Q Search	
	STATUS	CHANGE TYPE	PRODUCT V	rm Action		DUCT FAMILY		ACTION	
	Approved	New Product	Dark Chocola	IIII Action		lect a Family		→ Add	
			Are yo	u sure you want to Update Expira	ition Date.				
	✓ Expiration (1)		Note:	Changes once published cannot	be undone in Plant				
			Abba	inth a new request is submitted				Q Search	
	STATUS 🔽	CHANGE TYPE T	SPEC NAME	Cano	el Accept	ON DATE	Location 🛛	ACTION	
	Inactive	Recipe	White Chocolate	5012833-002 12572		09/23/2021	New York	Update	
	✓ Product Update	es (1)							
								Q Search	
	STATUS 🔽	CHANGE TYPE T	PRODUCT FAMILY	PRODUCT T	PRODUCT II	7	LOCATION T	ACTION	
	Approved	Recipe/Spec	External-Product	White Chocolate	12572		New York	Review	

Step 3

However, if the Product master data displays that a new Product has to be added in a consolidated product record on home screen's New Product grid, select decide family for the new Product and then Add that Product which previously was not reflected in Plant Applications.

chestration Hub					Comxclient
✓ New Product	s (1)				
					Q Search
STATUS	CHANGE TYPE	PRODUCT T	LOCATION T	PRODUCT FAMILY	ACTION
Approved	New Product	Dark Chocolate	New York	Chocolate	✓ Add

If a record appears where there are updates required in an existing product, then as a supervisor, click Review to proceed, and all the details display under the Summary tab in a compared view of the current information versus the existing product that was setup in Plant Applications.

Or	chestrati	ion Hub									8	comxclient 🔁
<	Back					Product Upda	ate - 12572			[Publish Accepted Changes	
		STATUS		PRC 12	орист 572		PRODUCTID 12572		LOCATION Hyderabad			LOG
	Summar	ry	Specs	BOM	Route	Recipe						
	23 Char	nges										
	AREA 🛛	ITEM V		PARAMETER V		CHANGE V	CURRENT VALUE IN PA V	NEW VALUE FROM ERP V	COMMENTS V			
	Spec	WEB_THIC	KNESS - High	Target Value		Value modification	35.00767676	3.00		View		
	Spec	WEB_THIC	KNESS - High	Lower Reject		Value modification	30			View		
	Spec	WEB_THIC	KNESS - High	Upper Reject		Value modification	50			View		
	Spec	CELL_DEN:	SITY - High	Target Value		Value modification	35.00767676	1.8		View		
	Spec	CELL_DEN:	SITY - High	Lower Reject		Value modification	30			View		
	5 10	20							< 1 2 3	4 5	>	

Step 5

You can verify the Limit of every specification. For example: what is their lower limit, and upper limit with the Target that was previously in plant and the current Target that has been proposed by Our Master App. You can select the right combination of properties and specifications from the drop-down values to update the specification values.

The Affected products icon provides the details of the products which are associated with the same property- characteristic combination as displayed in the UI.

88	Orchest	tration Hub									(9 comxclient	8	
ሑ	< Back F				Product Updat	Product Update - 12572					Publish Accepted Changes			
а С		STATUS		P	RODUCT 12572		productid 12572		LOCATION Hyderabad			LOG		
>	Sumi	nmary	Specs	BOM	Route	Recipe					Show All Values			
		PROPERTY %Sugar	~	SPECIFICATIONS High	~	ERP VALUE WEB_THICKNESS		AFFECTED PRODUCTS	Accept all					
		SPEC LIMITS		CURRENT VA	LUE OF PLANT APPS			NEW VALUE FROM ERP		COMMENTS	ACTION			
		Target		35.0	00767676			3.00			igodoldoldoldoldoldoldoldoldoldoldoldoldol			
		Lower Reject			30						igodoldoldoldoldoldoldoldoldoldoldoldoldol			
		Upper Reject			50						\ominus Reject ⊘ Accept			
		10 15 20										1 >		

When clicking the eye icon shown as shown below, you can see the affected products.

88	Orchestra	ation Hub										e c	omxclient	Ð
ሐ	< Back					Product Update	e - 12572				Publish Accepted C	hanges		
80 60		STATUS		ря 1	орист 2572		PRODUCT ID 12572		LOCATION Hyderabad					
>	Summ	nary	Specs	BOM	Route	Recipe					Show All Values			
		PROPERTY %Sugar		SPECIFICATIONS	~	ERP VALUE WEB_THICKNESS		AFFECTED PRODUCTS	Accept all					
		SPEC LIMITS		CURRENT VAL	UE OF PLANT APPS			NEW VALUE FROM ERP		COMMENTS	ACTION			
		Target		35.0	0767676			3.00			\ominus Reject \langle	Accept		
		Lower Reject			30						Θ Reject Θ	Accept		
		Upper Reject			50						\ominus Reject (Accept		
		10 15 20										< 1	>	

83	Orchestration Hub				e comxclient 💽
ф	< Back		Product Update - 12572		Publish Accepted Changes
88 69	STATUS	PRODUCT 12572	PRODUCTID 12572	LOCATION Hyderabad	
>	Summary Specs	BOM Route	Recipe		Show All Values
	PROPERTY %Sugar	SPECIFICATIONS	ERP VALUE	AFFECTED PRODUCTS Accept all	
	SPECLIMITS	PRODUCT DETAILS		× .omments	ACTION
	Lower Reject	Product Name 🛛	Product ID Y	Product Code 🛛	\ominus Reject ⊘ Accept
	Upper Reject	White Chocolate	2	12572	\ominus Reject ⊘ Accept
	10 15 20	5 10		< 1 >	
	PROPERTY				

You can reject or accept the changes in the Spec by providing comments. When accepting the changes, a message appears requesting a confirmation of the accepted changes. A comment is mandatory for rejecting a change.

88	Orchestration Hub				🖲 comxclient 🛛 🕞	
ф	< Back		Product Update - 12572		Publish Accepted Changes	
а Ба	STATUS PRODUCT 12572		status product productio 12572 12572 H			
>	Summary Specs	BOM Route You h specif	have selected different combination of property and ifications. Are you sure you want to continue?	Show All Values		
	96Sugar SPECLIMITS	High CURRENT VALUE OF PLANT APPS		Accept all	ACTION	
	Lower Reject	30	Cancel Confirm		Reject Accept	
	Upper Reject	50			Reject Ø Accept	
	10 15 20				x 1 >	
	PROPERTY	SPECIFICATIONS ERP VAL	LUE AFFECTED PRODUCTS			
	%Sugar	V Low V CELL_D	DENSITY			
		No Variance between Plant Apps and External syst	tem for the selected PROPERTY - SPECIFICATION combinat	tion.		

Orchest	Orchestration Hub									😃 comxcli
< Back					Product Upd	ate - 12572			Publish Accepted Cha	nges
	STATUS			PRODUCT 12572		PRODUCT ID 12572	LOCATION Hyderab	v ad		
Sum	nmary Spec	s	BOM	Route	Recipe				Show All Values	
	PROPERTY		SPECIFICATION	5	ERP VALUE	AFFECTED PRODUCTS		\leftarrow	_	
	%Sugar	~	High	~	WEB_THICKNESS	۵	Accept all	\		
	SPEC LIMITS		CUR	RENT VALUE OF PLANT APPS		NEW VA	LUE FROM ERP	COMMENTS	ACTION	
	Lower Reject			30					⊖ Reject	Accept
	Upper Reject			50					⊖ Reject	Accept
	10 15 20									< 1 >
	PROPERTY		SPECIFICATION	s	ERP VALUE	AFFECTED PRODUCTS	A count off			
	%Sugar	~	High	~	CELL_DENSITY	0	Acceptian			
	SPEC LIMITS		CUR	RENT VALUE OF PLANT APPS		NEW VA	LUE FROM ERP	COMMENTS	ACTION	
	Target			3.00			1.8		⊖ Reject	 Accept

You can click Accept all and all the changes in a property gets accepted.

8	Orchestra	tion Hub											😫 comxcli	ent 🚱
ሑ	< Back					Product Up	date - 12572					Publish Accepted Cl	nanges	
1 11		STATUS			PRODUCT 12572		PRODUCT 12572	D		LOCATION Hyderabad				
>	Summa	ary Specs		BOM	Route	Recipe						Show All Values		
		PROPERTY %Sugar	~	SPECIFICATIONS High	~	ERP VALUE WEB_THICKNESS	Α	FFECTED PRODUCTS	느 Undo					
		SPEC LIMITS		CURR	ENT VALUE OF PLANT APPS			NEW VALUE FR	ROM ERP		COMMENTS	ACTION		
		Lower Reject			30							⊆ Undo	Accepted	
		Upper Reject			50							🖆 Undo	Accepted	
		10 15 20											< i >	
		PROPERTY		SPECIFICATIONS		ERP VALUE	A	FFECTED PRODUCTS						
		%Sugar	\sim	Low	~	CELL_DENSITY		0						

You can click on Show all value to see all the available specification values for a property.

88	Orchestra	tion Hub					Comxclie	ent 🗗
ሑ	< Back			Product Upo	late - 12572		Publish Accepted Changes	
ын Ган		STATUS	PRODUCT 12572		PRODUCTID 12572	LOCATION Hyderabad		
>	Summ	ary Specs	BOM Route	e Recipe			Show All Values	
		PROPERTY	SPECIFICATIONS	ERP VALUE	AFFECTED PRODUCTS			
		%Sugar	✓ High	V WEB_THICKNESS	0			
		SPEC LIMITS	CURRENT VALUE OF PLA	NT APPS	NEW VALUE FRO	DM ERP COMM	ENTS	
		Target	3.00		3.00			
		Lower Reject	30					
		Upper Reject	50					
		Lower Entry						
		Lower Warning	35.00		35.00			
		Lower User						
		Upper User						
		Upper Warning	55.00		55.00			
		Upper Entry						
		Lower Control						
		10 15 20					Activate Windows	

Step 6

The Bills of Materials IN short BOM shall display the spec/recipe that are needed to be updated and need to be reviewed.

83	Orchestration Hub								😂 com	xclient 💽
ф	< Back				Product Update	- 12572			Publish Accepted Changes	
13 60	STATU	5	PRC 12	572		PRODUCT ID 12572	LOCA Hyder	non abad		
>	Summary	Specs	вом	Route	Recipe					
	Milk NEW Gelatin NEW									

When you switch to the recipe Tab, you can determine whether to accept the new changes that have been proposed by SAP/ERP/Oracle etc. system and update against our existing Product details in Plant Applications. After you accept/reject these differences of changes, the same data would be reflected/ get updated in Plant Applications for future operation.

88	Orchestration Hub					😫 comxclient 📑
ф	< Back		New Recipe Up	date - 12572		Publish Accepted Changes
ea €	STATUS	PRODUCT 12572		PRODUCT ID 12572	LOCATION Hyderabad	
>	Summary Specs	BOM Route	Recipe			Show All Values
						Accept all
	Milk NEW		Comment:	\ominus Reject 🥥 Accept		
	SPEC NAME T	CURRENT VALUE IN PLANT APPLICATIONS	NEW ERP VALUE			
	quantityPrecision		1			
	scrapFactor	-	0			
	lowerTolerancePrecision		1			
	quantity	÷	2			
	lowerTolerance		1			
	specNumber	•	81046			
	productCode		12572			
	storageUnit	*	1			
	specName	-	Milk			
	upperiolerancePrecision		1			
	5 10			< 1 Z >		Activate Windows

In Route, you can configure the channel that the Product line follows in sequences and post/adjust our route based on updates.

Orchestration Hub							🙂 comxclient 🛛 🔂
< Back				Product l	Jpdate - 12572	Pub	ish Accepted Changes
STATU.	3		PRODUCT 12572		PRODUCT ID 12572	LOCATION Hyderabad	VARIANCE LOG
Summary	Specs	BOM	Route	Recipe			
Available Routes		✓ General					
Q Search		Path Code: FA_PathCode Description: FA_Path					
FA_PathCode Assigned 🔮 Una	ssign	Production on this path shoul This Execution Path is control	d count to line production led by a schedule:	n: True True			
P_PathCode Assigned 🤡 Una	ssign	✓ Path Units					
			Execution Path	Unit Id	Is Schedule Point	Unit Name	Unit Order
				1		Tube_Packing	1
				2		Mixing	2
				3			3
				4			4
		✓ Path Products					
		PRODUCTID			PRODUCT CODE	DESCRIPTION	
		2			12572	White Chocolate	
							Activate Windows

Step 9

After you accept/reject the details you can publish those changes and review them in Review Changes for Product details screen. You can then publish them by clicking the Publish button.

<u></u> В с	Drchestration Hub					Seconxclient
h	< Back	Review	/ Changes for 12572			Publish
8 6	REQUEST DATE 06-27-2022	TOTAL ITEMS 6	ACCEPTED ITEMS 5	REJECTED ITEM 1	5	
	 Accepted Changes 					
	AREA 🛛	ITEM T	CHANGE T	CURRENT VALUE IN PLANT APPS	NEW VALUE FROM ERP	COMMENTS T
	Recipe	Milk-All items	Addition Of Item			
	Recipe	Gelatin-All items	Addition Of Item			
	Spec	%Sugar-High-Lower Reject	Value Modification	30		
	Spec	%Sugar-High-Upper Reject	Value Modification	50		
	Spec	%Sugar-Low-Target	Value Modification	1.8	Round	
L	5 10 20					< 1 >
	Rejected Changes					
	AREA 🐨	ITEM T	CHANGE 🛛	CURRENT VALUE IN PLANT APPS	NEW VALUE FROM ERP	COMMENTS T
	Spec	%Sugar-Medium-Target	Value Modification	Round	1.8	can not accept

If e-signature is configured , once user tries to publish e-signature pop-up window will open .

8	Orchestration Hub				e comxclient
ф.	< Back		Review Changes for 12572		Publish
■ % >	REQUEST DATE 12-06-2022	TOTAL ITEMS 1	Electronic Signature	REJECTED ITEMS 0	
	Accepted Changes		Add performer level details below		
	AREA V	ITEM V	PERFORMER SIGNATURE	N PLANT APPS T NEW VALUE FROM ERP T	COMMENTS V
	Recipe	Milk-94984-scrapFactor	Authenticate Performer	0.0	
	5 10 20		On click of "Authenticate Performer" button you will be routed to "User Authenticate Access (UAA)" page to authenticate and navigate to next steps		
	Rejected Changes				
	area V	item V	V ADD COMMENT	APPS T NEW VALUE FROM ERP T	COMMENTS V
			Cancel Submit		
					< 1 →

Click on Authenticate Performer and give correct credentials to do e-signature . It will take you back to original page .

GE D	igital
Welcome!	
comxclient	
••••	
SIGN IN	

8	Orchestration Hub				S comxclient
цт Т	< Back		Review Changes for 12572		Publish
₩ ₩ \	REQUEST DATE 12-06-2022	TOTAL ITEMS	Electronic Signature	REJECTED ITEMS 0	
	Accepted Changes		Add performer level details below		
	AREA V	ITEM T	PERFORMER SIGNATURE	N PLANT APPS T NEW VALUE FROM ERP	COMMENTS V
	Recipe	Milk-94984-scrapFactor	Deauthenticate Performer	0.0	
	5 10 20		Authentication is successful		
	area	ITEM V	✓ ADD COMMENT	APPS マ NEW VALUE FROM ERP マ	COMMENTS 🛛
			Cancel Subm	it	

After publishing, a success message appears: " All the accepted changes has been successfully published" and this indicates that updates that have been reviewed and accepted/rejected and are now reflected in our Plant Applications system.

88	Orchestra	tion Hul	b								e o	omxclient 🕑
Ψ	< Back		All the accepted c	hanges has been succe	ssfully publised						ish Accepted Changes	
ل ت ۳		STAT	rus 9	P	RODUCT L2572		PRODUCT ID 12572		LOCATION Hyderabad			.0G
>	Summa	ary	Specs	BOM	Route	Recipe						
	24 Cha	anges										
	AREA 🏹	item 🛛		PARAMETER	Y	CHANGE V	CURRENT VALUE IN PA	NEW VALUE FROM ERP T	COMMENTS Y			
	recipe	Milk-Nev	w Item	All items		Addition of Item						
	recipe	Gelatin-l	New Item	All items		Addition of Item						
	Spec	WEB_TH	IICKNESS - High	Lower Reje	rt	Value modification	30			Accepted		
	Spec	WEB_TH	IICKNESS - High	Upper Rejec	t	Value modification	50			Accepted		
	Spec	WEB_TH	IICKNESS - Low	Target Value	9	Value modification	Round	3.00				
	5 10	20							< 1 2 3	; 4 5 ≯		

.

After you select updated products and review them by clicking the variance log icon, you may see and track on Variance logs screen.

Back									Varia	nce Log			
P	roduc	t Description		Chan	ge Type		Act	ion			Choose Date R	lange	
ł	12572	2	~	ALL		~	A	L		~	Jun 26, 202	2 - Jun 27, 2	
													Ð - □ Q Search
		Produ ¥	Product Descr Y	Action ¥	Modified By 🏹	Date ↓1 V	Change Ty 🝸	Parameter ¥	ltem ¥	Previou Y	Change V	Location V	Comments V
		12572	12572	Accepted	comxclient	6/27/2022	SPEC	target	High-%Su	35.0076	3.00	Hyderab	F
		12572	12572	Accepted	comxclient	6/27/2022	SPEC	lowerReject	High-%Su	30		Hyderab	Ţ
		12572	12572	Accepted	comxclient	6/27/2022	SPEC	upperReje	High-%Su	50		Hyderab	Ę
		12572	12572	Accepted	comxclient	6/27/2022	SPEC	target	Low-%Sug	3.00	1.8	Hyderab	Ę
		12572	12572	Accepted	comxclient	6/27/2022	SPEC	target	Medium	3.00	Round	Hyderab	Ę

Plant Connect Flow

Step 1

Select Plant Connect in the Left Navigation Menu to enter the Plant Connect Application.

After entering the Application, All Product Properties appear configured in Proficy Plant Applications.

	Orchestration Hu	b														Comxclient	Ð
ሐ	Product Propertie	s				Plant Cent	ral Specifi	cation Ma	nagement	t							
łm	Search	Q											Activ	tv Logs	Publish Changes		
ጨ	Displaying 1-4/4	Prev Next	Inheritar	nce Override													
	> %Sugar			Spec Limits	L-Entry	L-Reject	L-Warn	L-User	Target	U-User	U-Warn	U-Reject	U-Entry	L-Control	T-Control U-Control		
>	> PerformanceRates																
	> PP_Process Paramete	rs															
	> PP_Quality Parameter	'S															

You can select any of the Product Properties on the left menu to see all its characteristics in a hierarchical manner.



Step 3

You can select any characteristics on the left menu. The spec Limits on the center top show the respective specification values.

88	Orchestration Hub																	Comxclien	t 🕒
ሑ	Product Properties				F	lant Cen	tral Specit	fication M	lanager	nent									
łm	Search	Q												Activi	ity Logs	Pub	lich Changes		
ጨ	Displaying 1-4/4	Prev Next	Inherit	tance Override										Activ	ity Loga	100	initial changes		
, ,	> %Sugar		4	Spec Limits	L-Entry	L-Reject	L-Warn	🗸 L-Use	r 🗹 Ta	rget 🔽	U-User	U-Warn	U-Rejec	U-Entry	L-Contr	rol 🗌 T-Cont	rol 🗌 U-Control		
>	> PerformanceRates			Specifications		GBS50	Ø	GI	BM50	Ø		GRM50	Ø						
	✓ PP_Process Parameters			Search Displaying 0-8/8 Prev Nex	Q L-User	Target	U-User	L-User	Target	U-User	L-Use	er Target	U-User						
	Search	Q		Blending_Speed		50			50			50							
	Displaying 0-8/8	Prev Next		Blending_Status		21			1			1							
	GBS50			Blending_Temp		25			25			25							
	GBM50			Blending_Weight		125			125			125							
	GRM50			Mixing_Speed		125			125			125							
	GRS50			Mixing_Status		1			1			1							
	RBS50			Mixing_Temp		25			23			25							
	RBM50			Mixing_weight		50			JU			JU							
	RRM50																		
	RRS50																		

You can click on any of the specification values to see detailed information in the Property Panel in the right side.

8	Orchestration Hub																	Comxclient	Ð
Ψ	Product Properties				Pla	nt Central	Specifica	tion Man	agemer	nt									
im	Search	۹												Г	Activity Logs	P	Publish Changes		
G.	Displaying 1-5/5	Prev Next	Inheritance	Override													concer on any goo		
Š	> %Sugar		-	Spec Limits	L-Entry	L-Reject	L-Warn	L-User	Ta	rget 🗹	U-User	U-Warn	U-Reject	U-Entr	y L-Control	T-Control	U-Control		
/	> FP_Quality Parameters			Specifications		GBS50	Ø	GE	BM50	Ø		GRM50	Ø		Property Pan	el			
	✓ PerformanceRates			Search	Q L-User	Target	U-User	L-User	Target	U-User	L-User	Target	U-User		Info		_		
	Search	Q		Blending(Kg/hr)		110			10			100			Blending(Kg/I	ar)			
	Diselaving 0.9/9	- Denne Manat		Case_Packing(Case		100			100			100			Spec Value : 101.00				
	GBS50	Prev Next		Filling(Tubes/Hr)		100			100			100_			Inherited From Not Inherited				
	GBM50			Labelling(Tubes/Hr)		100			100			100_			Comments	History	_		
	GRM50			Mixing(Kg/hr)		100			100			100			Last Modified [2022-06-29 06	ate : :29:50.463			
	GRS50			Tube_Packing(Tube		100			100			100			Comment : comment1				
	RBS50																		
	RBM50																		
	RRM50																		
	RRS50																		

Step 5

You can click on the History in the Property Panel to see all past transactions/updates for that value.

83	Orchestration Hub										Comxclient	Ð
ሑ	Product Properties	8			Plant Central Specific	ation Manageme	ent					
h	Search	Q								Activity Logs Publish Changes		
5	Displaying 1-5/5	Prev Next	Inheritance	Override								
	> %Sugar		<u>^</u>	Spec Limits	L-Entry L-Reject L-Warr	L-User	farget 🔽 U-I	User 🔲 U-Warn	U-Reject U-I	Entry L-Control T-Control U-Control		
>	> FP_Quality Parameters			Specifications	GBS50	GBM50	Ø	GRM50	Ø	Property Panel		
	✓ PerformanceRates			Search	0	_			J-User	Info		
		Q		Blending(Kg/hr)	Characteristic Spec Limit GBM50 Target	Spec Name Blending(Kg/hr	Spec Value) 101.00	×		Specification : Blending(Kg/hr)		
	Displaying 0-8/8 GBS50 GRM50 GRM50 GRS50 RBS50 RBM50 ARM50 BRS50	Prov Next	Ţ	Cese, Packing(Case, Filing(Tubes/Ho) Label(Tubes/Ho) Mung(Kg/Ho) Tube, Packing(Tube,	UserName V Date V conscient 2022-06-29-06-2.	Comment V comment1	Change V	Application V		Ber Value : 101.00 Internated From : Northmetted Comments History Last Hordisco Date : 2022-06-29:06:29:50.46:3 2022-06:29:50:46:3 comment1		

You can click the pencil Icon to enter Edit Mode for the respective characteristics and update the values.

8	Orchestration Hub															Comxclient	t D
ሑ	Product Properties				P	Plant Cent	tral Speci	fication N	1anagei	nent							
łm	Search	۹												Activ	ity Loge Publich Changes		
ጭ	Displaying 1-4/4	Prev Next	Inheri	tance Override										Activ	Publish Changes		
、 、	> %Sugar			Spec Limits	L-Entry	L-Reject	L-Warn	🗸 L-Use	er 🗹 Ta	arget 🔽	U-User	U-Warn	U-Reject	U-Entry	L-Control T-Control U-Con	trol	
<u> </u>	> PerformanceRates			Specifications		GBS50	Ø	GB	M50	X 🗸		GRM50	Ø		Property Panel		
	✓ PP_Process Parameters			Search O	L-User	Target	U-User	L-User	Target	U-User	L-Use	r Target	U-User		Info		
	Search	Q		Blending_Speed		50			50.00			50			Specification : Blending_Speed Spec Value :		
	Displaying 0-8/8	Prev Next		Blending_Status		21			1			1			50.00 Inherited From :		
	GBS50			Blending_Temp		25			25.00			25			Not Inherited		
	GBM50			Blending_Weight		125_		_	125.00			125			Comments History		
	GRM50			Mixing_Speed		125		_	125.00			125			Last Modified Date : 2022-06-27 11:43:12.587		
	GRS50			Mixing_Status		1			1			1			Comment : hi		
	RBS50			Mixing_Temp		25		_	25.00			25					
	RBM50			Mixing_Weight		50			50.00			50					
	RRM50																
	RRS50																

Step 7

After updating the values, click on the tick icon to add Comments for the changes made. After all the comments are entered click the Save button to proceed.

H	Orchestration Hub										Comxclient	6
ሐ	Product Properties	k.			Plant Central Specificati	on Managem	ient					
łm	Search	٩		Add Comments					~	Activity Logs Publish Changes		
G.	Displaying 1-5/5	Prev Next	inheritance 🚺 O	Add Commence				,	^			
	> %Sugar		A Spec Li	Char Name	Spec Name	Spec Limit	Spec Value	Comment		Entry L-Control T-Control U-Control		
`	> FP_Quality Parameters		Specifi	GBM50	Blending(Kg/hr)	Target	101.00	comment1 🛞				
	✓ PerformanceRates		Search									
		Q	Bien									
	Displaying 0-8/8	Prev Next	Case									
	GBS50		Fillir									
	GBM50		Labe									
	GRM50		Tube						_			
	GRS50							Cancel Sa	ive			
	RBS50											
	RBM50											
	RRS50											
			-									

If e-signature is configured , e-signature pop will be opened :



Step 9

Click on Authenticate Performer and give correct credentials to do e-signature . It will take you back to original page .

8	Orchestration Hub		😌 comxclient 🛛 🥃	
ሐ	Product Properties	Plant Central Specification Mar	nagement SiteName: siteone	
łm	Search Q		District Charges	
ጨ	Displaying 1-23/23 Prev Next	Override	Activity Logs Publish Changes	
	> % Milk Spec	Electronic Signature	U-Warn U-Reject U-Entry L-Control U-Control U-Control	
>	✓ % Sugar Speci	Add performer level details below		
	Search Q Sear	Pray Navi		
	Displaying 0-10/10 Prev Next Hig	PERFORMER SIGNATURE		
	Bitter-Sweet Chocolate	Deauthenticate Performer		
	Butterscotch Ice Cream Me	lium 🍼 Authentication is successful		
	Chocolate			
	Chocolate Ice Cream			
	Dark Chocolate			
	Mango Ice Cream	· ADD COMMENT		
	Strawbern/Ice Cream			
	Unsweetened Chocolate	Cancel Submit		
	Vanilla Ice Cream			
	> %Cocoa			
	> %Sugar with honey			
	> 1RoomLight			
	> 1RoomTemp			
	> Beer Color			
	> Beer Type			
	Cooling Temperature			
8	Orchestration Hub		😔 comxclient 🛛 🌔	
ሑ	Product Properties	Plant Central Specification Mar	inagement SiteName: siteone	
bm	Search Q			
P.,	Displaying 1-23/23 Prev Next Inheritance	Override	Activity Logs Publish Changes	
• ⊞	> % Milk Spec	mits Electronic Signature	U-Warn U-Reject U-Entry L-Control T-Control U-Control	
>	✓ % Sugar Speci	cations Add performer level details below		
	Search Q	ADD SIGNATURE		
	Displaying 0.10/10 Draw Mart Hi	Performer signature		
	Bitter-Sweet Chocolate	Deauthenticate Performer		
	Butterscotch Ice Cream Me	lium CAuthentication is successful		
	Chocolate			
	Chocolate Ice Cream			
	Dark Chocolate			
	Mango Ice Cream	V ADD COMMENT		
	Semi-Sweet Chocolate			
	Strawberry Ice Cream	Cancel Submit		
	Vanilla Ice Cream			
	> %Cocoa			
	> %Sugar with honey			
	> 1RoomLight			

> Beer Color> Beer Type

After the comments for the changes are entered, you can now click the Publish Changes button to publish the changes. A dialog box to confirm the changes appears. Click the Yes, Publish button.

88	Orchestration Hub				comxclient	Ð
ሐ	Product Properties		Plar	nt Central Specification Management		
hm		_ Q		Artivitul ras Publich Changes		
eg.	Displaying 1-5/5	Prev Next	Inheritance Override			
	> 96Sugar		Spec Limits 🗌 L'Entry	Confirm Action		
>	> FP_Quality Parameters		Specifications	M50 🖉		
	✓ PerformanceRates		SearchQ. Disclavior 0-6/6 Prev. Next.	Are you sure you want to Publish all the changes Target U-User		
		۹	Blending(Kg/hr)	Note: All the changes once published cannot be undone in Plant Apps until a new request is submitted 100		
	Displaying 0-8/8	Prev Next	Case_Packing(Case	100		
	GBS50		Filling(Tubes/Hr)	Cancel Yes, Publish 100		
	GBM50		Labelling(Tubes/Hr) Mixing(Kg/hr)	100 100		
	GRM50		Tube_Packing(Tube	100 100		
	GRS50					
	RBS50					
	RRM50					
	RRS50					
			.			

After the Publish button is clicked, a message appears saying "Successfully published changes to Plant Application." This means that the values are updated in Plant Applications.

8	Orchestration Hub																	😃 coi	mxclient	6
ሑ	Product Properties	Successfully	published chang	es to Plant Application																
łm	Search	Q												Activity Logo		Dubliah Chan				
en.	Displaying 1-5/5	Prev Next	Inheritance	Override										Activity Logs		r ublish chan;	ges.			
	> %Sugar			Spec Limits	L-Entry	L-Reject	L-Warn	L-User	🗸 Target	U-User	U-Warn	U-Reject	U-Entry	L-Contro	T-Control	U-Control				
>	> FP_Quality Parameters																			
	> PerformanceRates																			
	> PP_Process Parameter	5																		
	> PP_Quality Parameters																			

Step 12

After publishing the updates, you can see all the updates/changes made in Activity log.

88	Orche	stration	Hub												Comxclient	Ð
ሐ	< Back									Var	iance Log					
₽ E	F	Product Desc	cription ALL	~	Change Ty	pe ALL	~	Act	ion Al	L	~	Choose Date Range Jun 28, 2022 - Jun 29, 2				
>		Produ	Product Descr V	Action V	Modified By T	Date ↓1 ▼	Change Ty V	Parameter V	Item T	Previou V	Change 꼬	Location 🗑	Comments ▼	Q Search		
		5 10	20	Accepted	comxclient	6/29/2022	SPEC	larget	Blending(100.00	101.00	dem/2	Đ		1	

Variance Management Flow

Step 1

Select Variance Management in the Left Navigation Menu to enter the Variance Management Application.

After you enter the Application , you will see All Updates/Changes made in Orchestration Hub based in the date range selected . By default, it's selected as the previous date to current date.

h								Variance Lo	og						SiteName: siteo
•	Product Des	cription		Change Type		_	Action		Choo	ose Date Range					
à	All		~	All		~	All	~	Nov	6, 2022 - Dec	6, 2022				
	A	lests.													
>	Audit Ana	liysis													
												뒨 -	I Q 1	Search	
		Product ID 🛛	Product D 🛛	Action ¥	Modified By 文	Date V	Time Sta 🏼 🗸	Change Ty 🛛	Parameter V	Item ¥	Previous	Changed 🛛	Location V	Comments ¥	Esignatu
		12572	12572	Route - U	comxclient	12/1/2022	2022-12-0	ROUTE	FA_PathC	FA_PathC	null	null	Hyderabad		ComXC
		12572	12572	Route - As	comxclient	12/1/2022	2022-12-0	ROUTE	P_PathCo	P_PathCo	null	null	Hyderabad		ComXC
		12572	12572	Accepted	comxclient	12/1/2022	2022-12-0	SPEC	lowerReject	High %S	6.50		Hyderabad		ComXC
		12572	12572	Accepted	comxclient	12/1/2022	2022-12-0	SPEC	upperReje	High %S	12		Hyderabad		ComXC
		12573	12573	Expiration	comxclient	12/1/2022	2022-12-0	RECIPE	NULL	spec-num	null	2022-12-2	Hyderabad		
		12573	12573	Expiration	comxclient	12/1/2022	2022-12-0	RECIPE	NULL	spec-num	null	2020-02-0	Hyderabad		
	5 10	20												<	1 >

Step 2

User can see the respective audit information in two forms :

- 1. Grid data
- 2. Charting representation

You can select the required Product Description, Change Type (Spec / Recipe / New Product/Route), Action (Accepted/Rejected/Expiration Update/Add/New BOM-Created/New BOM-Rejected/Route-Assigned/Route/Unassigned) and the date to see the respective audit information in both grid and charting.

Step 3:

To view data in charts format, user needs to expend accordion for "Audit Analysis", through which user will be able to see the data in different tabs .



Step 4:

- Summary: User will be able to see an overview of total number changes. Summary tab consist of following two pie charts by Action and by Change Type. By Action: Overview of all the changes with respect to Action field. By Change Type: Overview of all the changes with respect to Change Type field.
- By Action: User will be able to see the data in form of bar charts based on the total actions performed in Enterprise connect / Plant connect. This tab will also include a range selector directly below chart which provide zooming and panning functionality for large set of data.

Default number of products on X axis for large number of data is 10. For analyzing more data on chart use range selector provided.

Archestration Hub										Comatient P
					Variance Log					SiteName: siteone
Product Description All	~	Change Type All	~ A	ction All	~	Choose Da Nov 6, 20	te Range 22 - Dec 6, 2022			
✓ Audit Analysis										
By Summary	By Action	By Change Type	By Frequency						된	5
		Produ	By ct Description: All	Action Change Type: A	II Action: All					
									Accepted Rejected Expiration Update	New BOM Item - Creat New BOM Item - Reject Route - Assigned
									Add	Route - Unassigned
12572		12572	Proc	uct Descriptio	n	125	73			12573
		12572						12573		

3. **Change Type:** User will be able to see the total actions performs based on Change Type Enterprise connect / Plant connect.

This tab will also include a range selector directly below chart which provide zooming and panning functionality for large set of data.

Default number of products on X axis for large number of data is 10. For analyzing more data on chart use range selector provided.



 Frequency: User will be able to see the frequency at which actions are performed on specification based on date. This tab will also include a range selector directly below chart which provide zooming and panning functionality for large set of data. Default number of products on X axis for large number of data is 10. For analyzing more data on chart use range selector provided.

Orchestration Hub						🕒 comxclient 🛛 🚱
				Variance Log		SiteName: siteone
Product Description All	~	Change Type All	→ Action All	~	Choose Date Range Nov 6, 2022 - Dec 6, 2022	
✓ Audit Analysis						
By Summary	By Action	By Change Type	By Frequency			뒨
			Product Descri	By Frequency ption: All Change Type:	All Action: All	
s						
otal Char						
				2022-12-01		
2022-12-01				Date		2022-12-01
				2022-12-01		

5. User can always export any of the charts from export icon in pdf form.

Orchestration Hub						\rm Comxclient 🕞
a				Variance Log		SiteName: siteone
Product Description All	~	Change Type All	→ Action All	~	Choose Date Range Nov 6, 2022 - Dec 6, 2022	
✓ Audit Analysis						
By Summary	By Action	By Change Type	By Frequency			Ð 🔶
sa Gie			Product D	By Frequency Description: All Change Type:	: All Action: All	
2022-12-01				2022-12-01 Date		2022-12-01
				2022-12-01		

Customization of Column Names

Step 1

To Customize the column Headers of any application.

38)	Orchestration Hub						Comxclient
ф							SiteName : siteo
łm							
ħ	> New Products (0)						
>	> Expiration (0)						
	✓ Product Updates (16)						
							Q. Seech
	STATUS ¥	CHANGE TYPE T	PRODUCT FAMILY	PRODUCT ¥	PRODUCT ID Y	LOCATION Y	ACTION
	O Approved	Recipe/Spec	External-Product	12572	12572	Hyderabad	Review
	O Approved	Spec	External-Product	156757	156757	Hyderabad	Review
	O Approved	Spec	External-Product	830111	830111	Hyderabad	Review
	O Approved	Spec	External-Product	764567	764567	Hyderabad	Review
	Approved	Spec	External-Product	830004	830004	Hyderabad	Review
	O Approved	Spec	External-Product	830020	830020	Hyderabad	Review
	O Approved	Spec	External-Product	101	101	Hyderabad	Review
	O Approved	Spec	External-Product	830126	830126	Hyderabad	Review
	O Approved	Spec	External-Product	830599	830599	Hyderabad	Review

Navigate to the base folder where Orchestration Hub is installed and open Customization JSON File from respective app folder "GE Digital\OrchestrationHub\NodeUIApp\product-orchestration-app-1.0.0.\assets". You will see JSON like below

Cusi	lomizatio	njson 🔤
1		
2	Ē	"enterpriseConnect":{
3	Ē	"newProductColumns":[
4	Ē	4
5	T T	L L
6		"colName": "STATUS",
7		"alterName": "STATUS"
8		"cellTemplate":"cellTemplateStatus"
9	-	},
10	É.	{
11	T	"colName": "CHANGE TYPE",
12		"alterName": "CHANGE TYPE",
13		"cellTemplate":"cellTemplateSpecType"
14	-	},
15	L L	1
16	T	"colName": "PRODUCT",
17		"alterName": "PRODUCT"
18		"dataField": "specshortname"
19	-	},
20	L L	1
21	T	"colName": "LOCATION",
22		"alterName": "LOCATION",
23		"dataField": "businessunits"
24	-	},
25	É.	(
26	T	"colName": "PRODUCT FAMILY",
27		"alterName": "PRODUCT FAMILY",
28		"cellTemplate":"ProductFamilyTemplate"
29	-	},
30	Ē.	{
31	T	"colName": "ACTION",
32		"alterName": "ACTION",
33		"cellTemplate":"newProductTemplate"
34	-	}
35	-],
36		"expirationColumns":[
37	Ē	

Here

- "colName" is the default name of the column which is visible on the UI.
- "alterName" is customizable.
- "dataField" is the id of the column.
- "cellTemplate" is the template id.

Step 2

You can customize the column name in "alterName" and save the file. It should be visible in the respective application column header once you refresh the browser window

Note: User should only change "alterName" to customize respective column names and should not change any other variables as it would affect the application.

Localization

Our applications support translation to English Japanese, Chinese and German languages.

We pick default language from your browser and our application shows up in the same language.

Note: As we are customizing column names, column headers are not translatable. User can specify the column header in desired language in customization JSON.



About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.