Aras Digital Twin Core 12.0R3

Release Notes

Document #: 12.0R3.2021122301

Last Modified: *12/23/2021*

Copyright Information

Aras Corporation
100 Brickstone Square
Suite 100
Andover, MA 01810

Phone: 978-691-8900
Fax: 978-794-9826

E-mail: support@aras.com

Website: https://www.aras.com/

Table of Contents

Send Us Your Comments

Aras Corporation welcomes your comments and suggestions on the quality and usefulness of this document. Your input is an important part of the information used for future revisions.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where and what level of detail?
- Are the examples correct? Do you need more examples?
- What features did you like most?

If you find any errors or have any other suggestions for improvement, indicate the document title, and the chapter, section, and page number (if available).

You can send comments to us in the following ways:

Email:
TechDocs@aras.com
Subject: Aras Product Documentation

Or,

Postal service:
Aras Corporation
100 Brickstone Square
Suite 100
Andover, MA 01810
Attention: Aras Technical Documentation

If you would like a reply, provide your name, email address, address, and telephone number.

If you have usage issues with the software, visit https://www.aras.com/support/

Document Conventions

The following table highlights the document conventions used in the document:

Table 1: Document Conventions

Convention	Description
Bold	Emphasizes shows the names of menu items, dialog boxes, dialog box elements, and commands. Example: Click **OK**.
`Code`	Code examples appear in `courier` font. It may represent text you type or data you read.
`Yellow highlight`	Code highlighted in yellow draws attention to the code that is being indicated in the content.
`Yellow highlight with red text`	Red text highlighted in yellow indicates the code parameter that needs to be changed or replaced.
Italics	Reference to other documents.
Note:	Notes contain additional useful information.
Warning	Warnings contain important information. Pay special attention to information highlighted this way.
Successive menu choices	Successive menu choices may appear with a greater than sign (-->) between the items that you will select consecutively. Example: Navigate to **File** --> **Save** --> **OK**.

1 Release History

Version	Date	Comments
12.0R1	2020-06-30	Initial Release
12.0R2	2021-03-02	Patch Release
12.0R3	2021-12-23	Patch Release

2 Platform Support Matrix

The following software versions are supported with Aras Digital Twin Core 12.0R3:

Component	Platform	Version
Aras Innovator		12.0 SP18
Aras Product Engineering		12.0R2 12.0R3
Operating System	Windows 10 Windows 8.1 OS X 10.15 (Catalina)	Edge Mozilla Firefox 68 ESR Mozilla Firefox 78 ESR Chrome 91 (minimum)

3 Enhancements and Known Issues

3.1 Version 12.0R3

3.1.1 Enhancements in Aras Digital Twin Core 12.0R3

Extend Physical Part BOM Functionality

Physical Part BOM logic is extended by allowing Non-Serialized (Lot and No Control) physical parts to be added to Physical Part BOMs, in addition to Serialized physical parts. The Remove and Replace (R&R) functionality has been extended to accommodate additional complexities associated with changing Non-Serialized parts where the quantities are greater than 1. The R&R logic also allows users to split and merge Non-Serialized parts, accurately retaining the change history and current configurations. The inheritance of Life data from an Operational Event promotion has also been added to Physical Part BOM records.

Add Unknown Physical Part to Physical Part BOM

It is now possible to create active Physical Parts where the serial or lot numbers are not known at the time of creation. Using the out-of-the-box configuration, Aras Innovator populates the unknown physical part with a unique system-generated serial or lot number. This allows an organization to construct physical part BOMs and make them active, and lets an Administrator update these records with the correct Serial or Lot Control numbers at a future date. Administrators can modify the Aras out-of-the-box configuration to suit their organization's business conditions.

Record Operational Event data

The new **OperationalEvent** item type allows users to record operational data of Parent Assets that have as-maintained service structures, recording event details such as "Flights", "Trips" or "Missions" along with the amount of life units consumed during the event. Additionally, on promotion, the life data is passed to the Parent asset and all of the inherited life-controlled children in the entire BOM structure for the currently installed physical parts only.

Refer to the *Aras Digital Twin Core 12.0R3 - User Guide* for further details.

3.1.2 Issues Fixed in Aras Digital Twin Core 12.0R3

Issue #	Description
F-003351, F-002755	Operational Event Tracking provides Users the ability to input mission and operations data for a specific field-active asset.
F-003300, F-004928	Operational Event Physical Part (BOM) Implementation takes the operations data and posts the same data to the parent physical part and its children when the user applies the data promotion to its direct descendants.

Issue #	Description
F-004381	Operational Event Life Unit Relationship displays all the user defined discrete life units and records the consumption for that operational event.
F-003575	Physical Part Life History Log Tab records the discrete life changes to a life controlled physical part alongside the associated operation event that generated the history change.
F-002713, F-005249, F-004908	Modify Physical Part Creation to handle Lot and No Control Parts extends the Physical Part logic allowing non-serialized physical parts to be included in active physical part bills of material and provides user friendly functions that control the removal and replacement of all control type physical parts.
F-002911	Modify Physical Part Creation to handle Unknown Serial and Lot Numbers allows users to build, promote to active, and manage physical part BoMs when the physical part ID's numbers are not readily known at the time of BoM construction.

3.1.3 Know Issues in Aras Digital Twin Core 12.0R3

Issue #	Description	Workaround
I-017338	A regular user currently sees property labels instead of the property names in error messages.	None. Fix targeted for a future release.
I-028526	It's possible to bypass the date entry controls and enter invalid query into the "Active On" field for Physical Parts. Doing so will return invalid data.	Users are advised to always use the Active Data dialog to input Date/Time data from the Time Point and Time Period filters.

3.2 Version 12.0R2

3.2.1 Enhancements in Aras Digital Twin Core 12.0R2

Introduction of Part Policy to support Control Type and Life Control

This release introduces a new ItemType called **Part Policy** with the **Control Type** property that determines the Control Type (Serial, Lot, or No Control) assignment to a related **Physical Part** Item instead of the Control Type defined on the source **Part** Item. This move provides greater flexibility to Digital Twin Core (DTC) and planned enhancements to the application. Refer to the *Aras Digital Twin Core 12.0R2 - User Guide* for further details.

Introduction of Life Control

This release also introduces new functionality called Life Control that captures and tracks the run time consumed characteristics and events of life-controlled **Physical Part** Items and their BOM components operating in service. This functionality includes several new Aras Innovator ItemTypes and RelationshipTypes. Detailed descriptions are available in the *Aras Digital Twin Core 12.0R2 - User Guide*.

3.2.2 Issues Fixed in Aras Digital Twin Core 12.0R2

Issue #	Description
F-002253	Defines the Item Type Properties of Life Parameters that are related to Parts to track life values.
F-002606	Modify Life Parameter List properties to ensure data accuracy.
F-002747	Life Policy Item Type Definition where multiple life parameters are grouped together under one life policy.
F-002754	Defines the Part Policy Item Type where the life policy is related to Parts and where the final value for control type is made.
F-002799	Physical Part Additional Constraints to ensure data accuracy.
F-002901	Update to the Physical Part Item Type for changes to Part Policy. This feature ensures that the Physical Part Control type uses the Part Policy and not the Part control type setting.
F-002908	Introduce freezing of related life characteristics when in use, to ensure data accuracy and integrity are maintained.
F-002939	Update to Part Policy to add Control Type Property This feature allows the user to specify the Control Type property without versioning the original release Part.
F-003234	Define the Part Policy Item Type - Life Parameter Relationship relates the life parameters assigned to a Physical Part, based upon the life policy related to the Part Policy.
F-003235	Define the Part Policy Item Type – Constraints to ensure data accuracy and integrity.
F-003470	The Physical Part Current Life Value Relationship allows the user to enter and sustain discrete type life values.
F-003472	Change LifeParameter Unit from the List to the Life Unit item type. This feature ensures that data accuracy and integrity is maintained during life value inputs.
F-003635	Life Parameter, Policy and Part Policy Icons for life control item types.

Issue #	Description
F-003667	The Physical Part Date Value relationship enables the user to enter and sustain an expiration date type life value.

3.2.3 Known Issues in Aras Digital Twin Core 12.0R2

Issue #	Description	Workaround
IR-090905	Unable to Save Physical Part with other Control Type. In 12.0R1, many Physical Part Items with the same Part Number value can have different Control Type values because many Revisions with different Control Type values can exist for one Part Item.	In 12.0R2, all Physical Part Items with the same Part Number value always have the same Control Type value because only one Part Policy Item can exist for all Revisions of one Part Item. Refer to Section 14 - Migrating from DTC 12.0R1 to 12.0R2 in the *Aras Digital Twin Core 12.0R2 - User Guide* for details.

3.3 Version 12.0R1

3.3.1 Enhancements in Aras Digital Twin Core 12.0R1

Initial Release for Aras Innovator 12.0 SP7

The initial release of the Aras Digital Twin Core application is now available on Aras Innovator 12.0 SP7.

This application release provides the foundation for creating and maintaining Digital Twin representations of actual built products that are instantiated from their originating Engineering Parts. The application supports processes involving post-build product configurations including As Built, As Delivered, and As Serviced.