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Release 2023 R1

Download Center Info - Ansys Product Service Pack

Introduction

This package contains service pack updates for Ansys products included in the unified installation package. Each service pack release for 2023 R1 will be listed serparately, along with the related issues addressed, within this document.

Ansys Release:

2023 R1

Service Pack:

2023 R1.05

Release Date:

7/19/2023

Installation Prerequisites:

Ansys Release 2023 R1 must first be installed before installing service pack 2023 R1.05. Detailed product installation instructions are available in the Ansys, Inc. Installation Guide for Windows and Ansys, Inc. Installation Guide for Linux.

Issues Addressed (by Product):

Sherlock

- Since 2023 R1, Sherlock has been using the stiffness-based technique when calculating effective CTE for stack-ups. However, most users do not have the required information to use the stiffness-based approach. Without the necessary material properties, effective CTE results for stack-ups are much higher. This patch reverts Sherlock's calculations to the volume averaging logic used in versions 2022 R2 and earlier.

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Service Pack:

2023 R1.04

Important:

Service Pack 2023 R1.04 involves updates to Ansys licening functions. Ansys recommends that everyone using Ansys release 2023 R1 should install this service pack.

Release Date:

5/24/2023

Installation Prerequisites:

Ansys Release 2023 R1 must first be installed before installing service pack 2023 R1.04. Detailed product installation instructions are available in the Ansys, Inc. Installation Guide for Windows and Ansys, Inc. Installation Guide for Linux.

Issues Addressed (by Product):

Licensing

- Addressed an issue in which HPC Paramentric was over consuming HPC licenses in certain specific use cases.

Service Pack:

2023 R1.03

Release Date:

5/3/2023

Installation Prerequisites:

Ansys Release 2023 R1 must first be installed before installing service pack 2023 R1.03. Detailed product installation instructions are available in the Ansys, Inc. Installation Guide for Windows and Ansys, Inc. Installation Guide for Linux.

Issues Addressed (by Product):

Mechanical

Windows

- You are unable to start the Mechanical and Workbench LS-DYNA applications in Japanese after installing the Ansys 2023 R1.02 Service Pack. (807687)

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Linux

- After installing SP 2023 R1.02 on a computer that has not run the initial release of Workbench Mechanical 2023 R1 or the 2023 R1.01 Service Pack or cleaning up app data on a computer that has run Workbench Mechanical 2023 R1 or the 2023 R1.01 Service Pack, the Mechanical application would not start. (823457)

Sound

- The Sound-SAS interface freezes when clicking the Play button. (779025)

Service Pack:

2023 R1.02

Release Date:

3/22/2023

Installation Prerequisites:

Ansys Release 2023 R1 must first be installed before installing service pack 2023 R1.02. Detailed product installation instructions are available in the Ansys, Inc. Installation Guide for Windows and Ansys, Inc. Installation Guide for Linux.

Issues Addressed (by Product):

Discovery

- Application responsiveness when defining an electromagnetic simulation has improved. (736104)
- The mass monitor provides accurate results for modal analysis in the Explore stage. (736117)

Icepak

- Fixed an issue that could lead to a failure to validate projects that contain subvolumes, despite being set up correctly. The defect would prevent such project files from running. (749826)
- Addressed issue that could cause a license-checkout failure for EnSight or CFD-Post, when launched from within the Forte Simulation Interface, when the Forte Simulation Interface had been launched from the Forte Launcher. (748403)

Licensing

- For release 23.1, when using Elastic Workflow with ladder features, more products were consumed than expected. (779810)
- Addressed an issue that occurred when using idle timeout with the workbench application. (765040)

Mechanical

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- For the What's New content available in Mechanical, the image included at the start of the material has been updated to a corrected version. (775289)

- Imported Trace Data. When you import trace layout data, the Imported Data Transfer Summary object now presents an average metal fraction for source and target elements. This enables you to compare your source ECAD metal percentages with the metal percentage found in the target, including both averaged modeling and black/white modeling. This enables you to validate your target metal fractions against the external application, such as Ansys Sherlock, you use to provide this metal fraction. (780826)

optiSLang

- After starting update for full system of sensitivity, the system does not update and generates an error. (761067)

- The license dialog for optiSLang inside Workbench does not allow you to select Permium without first selecting Enterprise and closing and reopening the dialog box.. (725669)

Sherlock

- Addressed an issue in Sherlock which could prevent you from being able to change the **Life Cycle Service Life** units from **years** once the Life Cycle had been created. Sherlock would report a validation error which indicated that the **Service Life** must be at least a specific value to cover all Phases. The value Sherlock specified was the value the user had already entered.

Service Pack:

2023 R1.01

Release Date:

2/8/2023

Installation Prerequisites:

Ansys Release 2023 R1 must first be installed before installing service pack 2023 R1.01. Detailed product installation instructions are available in the Ansys, Inc. Installation Guide for Windows and Ansys, Inc. Installation Guide for Linux.

Issues Addressed (by Product):

Discovery

- Clicking in a physics condition value field now shows the original precision entered. (736198)

- Performance was improved for cases in which rotating fluid zones are assigned to complex geometry. (739953)

- Messaging for reaction resultant monitors was improved. (759607)

- A warranty disclaimer for bolt and beam library data was added. (760759)

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- Thermal conductance is now available for contact groups in the Refine stage. (751240)

For Discovery features for this service pack, see Features and Enhancements Included (by Product): (p. 6).

EnSight

- Updated file structure for compliance.
- Updated ZLIB to version 1.2.13.

FENSAP

- Remeshing script was updated to change unused volumetric regions from dead to solid, to avoid an error during volume mesh generation with Fluent v231 (759504)

Fluent

- In the Fault-tolerant Meshing workflow, continuous prism splitting (using the Split Prism? option) is now properly respected after updating boundary layers. (755582)
- When the Pro license is selected for the capability level in Fluent Launcher, an error is now generated if you attempt to read a case with the pressure-based solver if the pressure-velocity coupling scheme is unsupported: for a steady case, only the Coupled scheme is supported; for a transient case, only the SIMPLE scheme is supported. (750390)
- When the Pro license is selected for the capability level in Fluent Launcher, if you read a steady case with the pressure-based solver with Global Time Step selected for the Pseudo Time Method, the setting is now respected; also, an error is now generated if the Pseudo Time Method is instead turned off for such a case. (750390)
- For General Turbo Interfaces, the scaling factor has been adjusted to accurately account for mass conservation when an ensemble of passages per row are used to model the blade row interactions. The adjustment may change previous results but will produce more accurate flow conservation. (766242)

For Fluent enhancements for this service pack, see Features and Enhancements Included (by Product): (p. 6).

Forte

- Fixed an issue that could lead to a failure to validate projects that contain subvolumes, despite being set up correctly. The defect would prevent such project files from running. (749826)
- Addressed issue that could cause a license-checkout failure for EnSight or CFD-Post, when launched from within the Forte Simulation Interface, when the Forte Simulation Interface had been launched from the Forte Launcher. (748403)

Licensing

- The latest FNP upgrade to Ansys License Manager caused an issue with idle timeout. (744579)
- For Ansys product release 2023 R1, HPC Parametric was consuming additional features when using Elastic Licensing only. (765040)

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Mechanical

- When using the Distortion Compensation Add-on with STL supports, distortion compensation results in the supports and at the part/support interface are now correct. (739615)
- If an LS-DYNA system in Mechanical contains Imported Fields for a short Fiber workflow, and a Structural system is added to the same model, Mechanical will fail when it reopens. (746515)
- An incorrect string entry was found in the Chinese version of the product. The term for 'Contact' was incorrect and has been changed. (761000)
- Fixed an issue in which the Result Record option for Motor EM force in the Standalone preprocessor was not working properly when the option was enabled. (764679)

optiSLang

- Actor isolation logic broken by previous fix to bug 667594, the logic has been corrected. (780876)
- Putty version upgraded to 0.78 to fix critical vulnerability. (748031)
- AEDT no longer freezes when OCO is used in optimization. (745221)
- Seed value is not exposed at UI level as OCO setting. (764217)

TurboGrid

- There is improved robustness in generating the unstructured mesh used in modeling high-fidelity geometric features. (752735)

Features and Enhancements Included (by Product):

Discovery

- **Intake and Exhaust Fan Conditions**

  Intake and exhaust fans are new fluid flow conditions.

  – This is a **Beta** option and is only available in the **Refine** stage:

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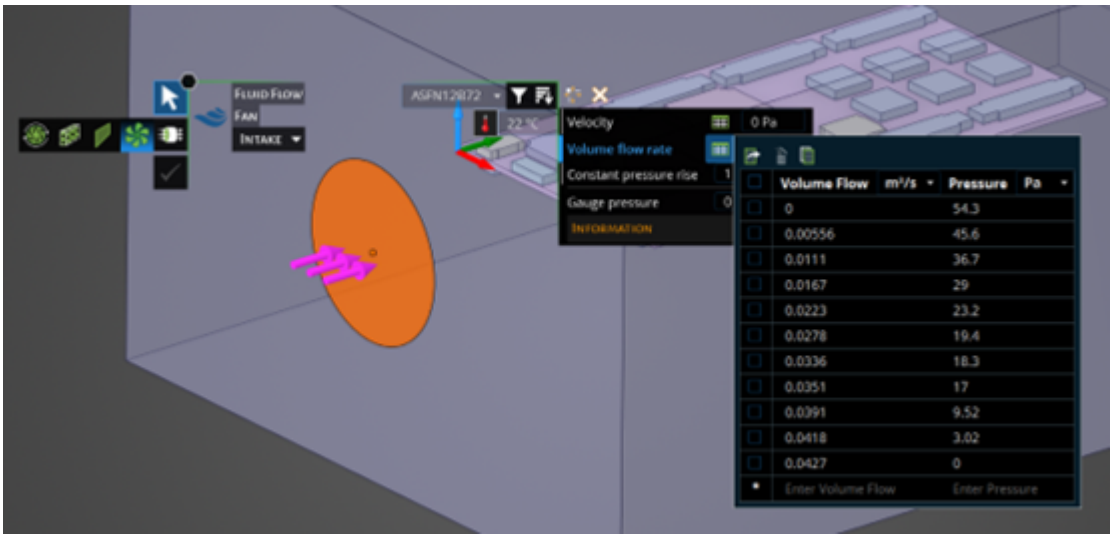
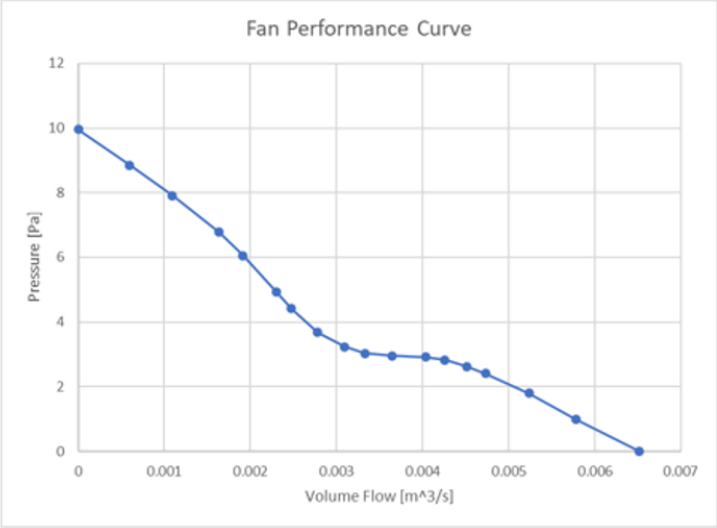
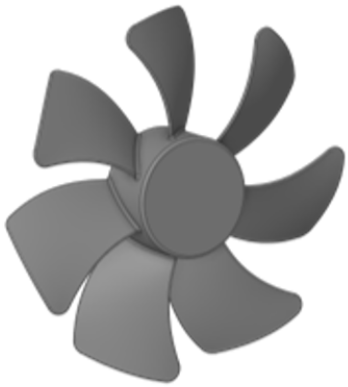


– Specify a fan curve based on volume flow rate or velocity versus pressure or constant pressure rise:





– An Icepak fan library is included with common electronics cooling fans.

– You can add user-defined fan libraries.

– You can filter fan selection based on library, manufacturer, or fan area.

- **Topology Optimization Enhancements**

  Topology optimization enhancements include optimizing with stress constraints and optimizing for volume with factor of safety constraint. These options are **Beta**. In addition, Discovery now supports the parameterization of topology optimization inputs.

  – Optimize with stress constraint enables you to find the minimum acceptable mass without multiple optimizations at different volume constraints:

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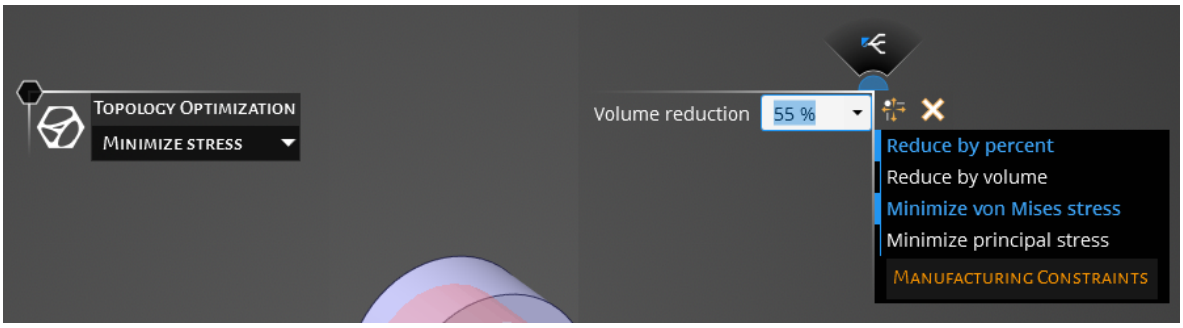
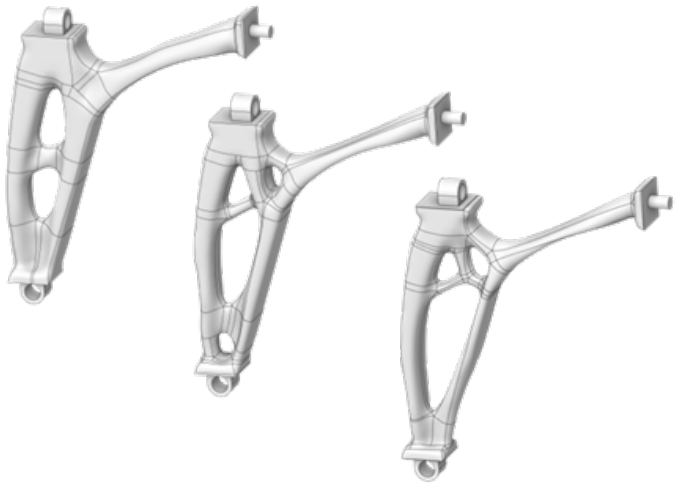


– While Optimize for volume with factor of safety constraint enables assemblies with different materials to be optimized:

– Parameterization of topology optimization inputs enables you to perform multiple defined variations of topology optimization with different criteria, geometric parameters and/or test cases. For example, the following image shows defined variations of topology optimization of a control arm with varying volume reduction criteria including multiple test cases:



- **Parameter and Test Case Enhancements**

  Discovery now supports additional physics condition parameters:

  – Remote point locations for displacement, force, and mass conditions

  – Wall thermal inputs: Convection temperature and coefficient, heat flow, heat flux, and temperature

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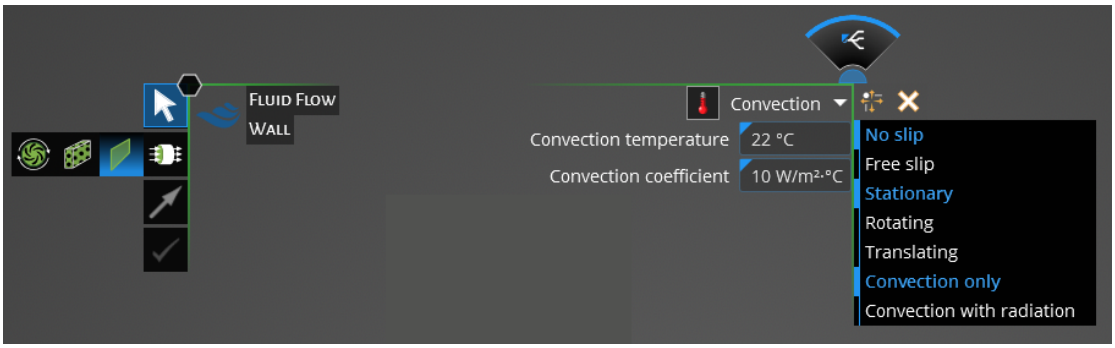

To improve access to parameters, test cases, and defined variations, defined variations are always shown on the Simulation Information Display (SID):

To enable quick access to physics conditions, the assigned physics condition will open when you click a parameter in the parameters table.

Fluent

- When using multizone meshing in the Watertight Geometry workflow, you are now presented with a warning while attempting to add edges when you already have CAD edges defined based on named selections from the imported geometry, due to occasional problems when assigning edge sizing.

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