

Release Notes



Revision 179 of AMLS 5.2 / FastFRS 2.2

November 2022

1. AMLS

CAUTION: starting from AMLS 5.2 the FlexIm daemon v11.16 and an AMLS version 5.2 specific license file are required. The updated daemon and license file are backward compatible with legacy AMLS 5.1 versions. Please see the installation manual for detailed instructions.

CAUTION: End of support warnings

- This is the last AMLS release that officially supports the RHEL/CentOS 6.x operating system by default
- This is the last AMLS delivery database release that officially supports MSC-Nastran 2018, 2019 and SimCenter/NX-Nastran 12, 2019 by default.
- In future releases only the latest sub-version of each Nastran release will be supported by AMLS. For example from MSC 2021.0 - 2021.4, only latest sub-version MSC 2021.4 will officially be supported. Please upgrade your Nastran versions accordingly.

CDH/AMLS - Enhancements version 5.2.r179 compared to 5.2.r151

- Fixes for some minor and very rarely encountered bugs

2. FastFRS

CDH/FastFRS - Enhancements version 2.2.r179 compared to 2.2.r151:

- Computation time reduced for unusual cases in which the viscous damping matrix has many nonzero rows and columns, by improving the FastFRS strategy selection process
- Several smaller performance enhancements



3. Nastran Delivery Data Bases (DDB)

In this release the DDB for the following versions of Nastran are available:

MSC: 2018.2, 2019.1, 2020.1, 2021.4, 2022.1, 2022.2

NX/SC: 12, 2020.1, 2020.2, 2021.1, 2021.2, 2022.1

CAUTION: This is the last DDB release that officially supports MSC 2018, 2019 and NX 12, 2019 by default.

CAUTION: All DDBs in the current release can **only be used by AMLS executable in the current release, i.e. 5.2.r179 or higher revisions numbers.**

For extended long-term support of an older DDB version, please contact: support@cdh-ag.com. Please note that every new release of the AMLS DDBs is stamped with the creation date, which can be seen in the f06 file:

```

*****
*****
**
**          CDH/AMLS AND CDH/FASTFRS DMAP PROGRAM          **
**          COPYRIGHT 2007                                **
**  THIS DMAP PROGRAM HAS BEEN DEVELOPED BY CDH AG        **
**          ALL RIGHTS RESERVED.                          **
**          CREATION DATE: 2022-11-11                    **
**          SUPPORT: SUPPORT@CDH-AG.COM                  **
**
*****
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```

The following items have been updated in both MSC and NX/SC DDBs.

- Implemented support for MSC-Nastran 2022.1, 2022.2 and NX/SimCenter-Nastran 2022.1
- Implemented support for MSC Nastran Monte-Carlo simulation (Case Control MONCARL). MONCARL runs using AMLS and FastFRS will benefit

significant reductions in computation time compared with standard MSC Nastran

- Enhanced support for Nastran modal transient SOL 112
- Bug fix for residual vector calculations for bush and damper elements
- Bug fix for incorrect response results of SOL 111 in rare cases due to treatment of massless mechanism
- Enhanced support for Nastran EIGRL with MAX option
- Bug fix for NX-Nastran simulations using lumped-mass: PARAM,COUPMASS, -1
- Bug fix for excessive information printed into f04 file in rare occasions
- Updated support for CDH/VAO tool

4. Nastran Delivery Data Bases (DDB) for Advanced Acoustic Solver Interface (AASI)

CDH Advanced Acoustic Solver Interface (AASI) is a new special DDB which offers a number of more advanced modules than the standard AMLS DDBs. The current initial release includes the following features:

- **CDH/AASI-PEM** is a new AMLS/FastFRS based interface to efficiently solve acoustic simulation containing porous elastic material (PEM) from MSC Nastran/ACTRAN
- **CDH/AASI-FastPPF** is a new highly efficient algorithm for computing Panel Participation Factors (PPF)

NOTE: Use of AASI DDB requires a CDH/AASI license additional to AMLS/FastFRS licenses.

Key advantages of CDH/AASI

- Up to 10x times **reduced computation time** compared to MSC Nastran (FastPPF).
- Significantly **lower disk space resource** requirements
- Performance benchmarks also show **improved stability** of AASI over the ACMS solver

The details of AASI DDB are available in the accompanying separate document *[CDH AASI Description and Guide](#)*.

In case of further questions please contact: support@cdh-ag.com

End of Release Notes

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