

July 22, 2019 **UPDATED**

BETA CAE Systems announces the release of the v20.0.0 of its software suite



About this release

Always aiming to take the CAE experience further, BETA CAE Systems proudly presents the release of v20.0.0 of its software suite.

There are many new tools and improvements to look forward to in this release.

BETA CAE Systems product line, with a plethora of revolutionary tools and groundbreaking solutions, unquestionably addresses all challenges involved in the contemporary engineering simulation industry.

It successfully combats all bottlenecks introduced by modeling complexity in any application area, and offers a significant boost to the operations of the CAE modeling process as a whole.

Do not miss:

- The new potential that arises with our Modular Run Management solutions.
- The abundant developments that took place for mid-surface extraction and meshing in ANSA, with special concern on CFD processing demands. An indicative example of the latter is the Conv2Poly function that can now be applied on Light Volume Representation meshes, thereby completing the full process in light mode with significant memory and time reduction.
- The long-awaited parallel volume meshing of multiple independent volumes via the functions that produce unstructured volume mesh.
- The extended capabilities of ANSA via the implementation of Virtual Reality in pre-processing, captivating the perception and cognition of any given FEA workflow from a closer and more realistic perspective.
- Our dedicated solutions on User Toolbar development in META for post-processing applications, augmenting development acceleration and robustness.
- The innovative introduction and implementation of Machine Learning in BETA products, starting with RETOMO.

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Videos - Latest developments in BETA's product line



ANSA v20.0.0 Highlights

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EPILYSIS v20.0.0 Highlights

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META v20.0.0 Highlights

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RETOMO v20.0.0 Highlights

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New tools & Highlights

More capability, flexibility and User Productivity with ANSA

The new version of ANSA offers a brand new set of exclusive tools & functions, not only in the mid-surfacing of casting parts, but also towards the perfect mesh rendering, maintaining a clear sense of users' genuine needs.

Focusing on CFD applications, the Feature Manager now supports Special Perimeters (Sharp, Free and Leading Edges) and Trailing Edges. The redesigned Spacing CFD function can treat the above features with specific meshing rules.

Moreover, this version paves the way towards a more reliable path from PDM to CAE, addressing cases that require specialized modeling, such as Connections and Features that have always posed a challenge for the preparation of a high quality FE model.

The Optimization domain also comes forward with ground-breaking solutions, including the new beam optimization tool plugin, as well as a new process in Topology Optimization for smooth surface mesh creation, using ANSA & META.

The Virtual Reality capabilities so far applied for post-processing are now transferred and amplified in ANSA, offering extended pre-processing potential from a closer and more realistic perspective.

Expanded functionality and process acceleration in EPILYSIS

EPILYSIS, following its objective to operate as a solution in the field of Finite Element Analysis, comes with extended functionality in diverse areas, especially focusing on SOL200 Multidisciplinary Optimization, while the significant acceleration in the overall process execution is definitely one of its main assets in v20.0.0.

Moreover, the NVH analyst can now be further assisted with the identification of the cause of a problematic NVH behavior that needs to be improved, through a new type of results that can be output from EPILYSIS. These results are the Energy (Kinetic, Potential and Total energy) contributions of component modes to each calculated system mode when the system modes of an assembly are calculated based on the modes of each of the components. This analysis can only be driven from within the NVH Console and the respective results can be read and displayed in META through a GUI which provides the option to visualize this contribution either per system mode or for all system modes that are included within a given frequency range.

Meeting diverging needs from various disciplines with META

Expanding the multi-thriving post- processing capabilities of META, the new graphics kernel has been enriched whereas new toolbars, functions' refactoring, and redesigned tools give a boost, especially in the field of NVH.

Moreover, extended functionality not only per discipline, but also in areas such as METADB and Virtual Reality, guarantee high levels of automation, as well as impressive performance. Do not miss the new User Toolbar Development Kit that expands user competence by offering robust development with Python, accelerating any on-going process.

Simplicity, convenience and speed with KOMVOS, as a stand-alone application

KOMVOS-SDM Console was initially introduced as an innovative simulation Model and Data Management platform, which offers direct communication with any data management system, in a fully customizable way, hiding process complexity. Today, it steps forward as a stand-alone application, small in size, easy-to-install and launch, with extended Product Tree supported formats, as well as significant improvements for optimum User Experience.

Revolutionary implementations in RETOMO

With this new version, RETOMO potential reaches to an even higher level. You are invited to choose from a plethora of expanded capabilities, such as newly introduced manual tools, offering quick and handy selection, enhanced visualization modes, and advanced filtering. Leveraging in-house developed Machine Learning algorithms, this version of RETOMO offers an intelligent alternative to segmenting challenging scans with the introduction of Machine Learning Segmentation.

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

Compatibility and Supported Platforms

ANSA files saved by all the first and second point releases of a major version are compatible to each other. New major versions can read files saved by previous ones but not vice versa.

META Project files saved from version 20.0.0 are compatible and can be opened by META version 16.0.0 or later. To be readable by META versions earlier than v16.0.0, they have to be saved selecting the option "Version <16.0.0".

Support for 32-bit platform has been discontinued for all operating systems.

Download

Where to download from

Customers who are served directly by BETA CAE Systems, or its subsidiaries, may download the new software, examples and documentation from their account on our server. They can access their account through the "user login" link at our [web site](#). Contact us if you miss your account details. The Downloads menu items give you access to the public downloads.

Customers who are served by a local business agent should contact the [local support channel](#) channel for software distribution details.

What to download

All files required for the installation of this version reside in the folder named "**BETA_CAE_Systems_v20.0.0**" and are dated as of **July 22, 2019**. **These files should replace any pre-releases or other files downloaded prior to that date (e.g. installation files dated July 17, 2019)**. The distribution of this version of our pre- and post-processing suite is packaged in one, single, unified installation file, that invokes the respective installer and guides the procedure for the installation of the required components.

For the installation of the software on each platform type, download from the respective folders, the .sh file for Linux or the .msi file for Windows.

In addition to the above, optionally, the META Viewer is available to be downloaded for each supported platform.

The tutorials and the example files reside in the folder named "TUTORIALS". This folder includes the complete package of the tutorials and example files, and a package with only the updated ones.

The Abaqus libraries required for the post-processing of Abaqus .odb files are included in the installation package and can be optionally unpacked.

Earlier software releases are also available in the sub-directory called "old" or in a folder named after the product and version number.

