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Make the most of additive manufacturing

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Visit **sourcegraphics.com/software/autodesk-netfabb/** to find out more.

Autodesk® Netfabb® additive manufacturing software helps you quickly get from a 3D model to successfully printed parts.

End-to-end workflow

Designed for production environments, Netfabb provides efficient build preparation capabilities alongside tools for optimizing designs for additive manufacturing, simulating metal additive processes, and planning for post-printing CNC operations to help you reduce costs, increase efficiency, and improve part performance.

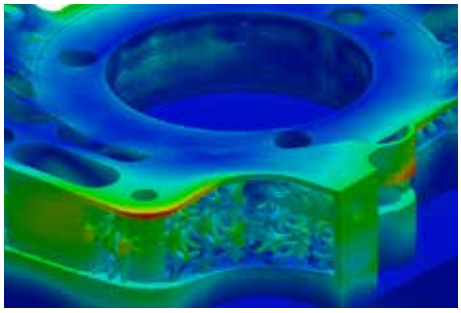
Facing these challenges?

- Converting and importing models from many different CAD applications.
- Difficulties creating models that capitalize on the design freedom offered by additive manufacturing.
- Excessive time spent repairing and prepping data to avoid print errors.
- Modifying models to make them suitable for additive manufacturing.
- Print failures that put projects behind and reduce profitability.
- Delays in quoting jobs and producing build reports.
- Maximizing the number of parts you can fit in each build.
- Different software required to prepare builds for each machine.
- Modifying mesh files in your CAD program.

Design for additive

Netfabb includes design optimization tools that help you achieve results that are lighter in weight, as stiff or as flexible as needed, with your chosen aesthetics and unique material properties.

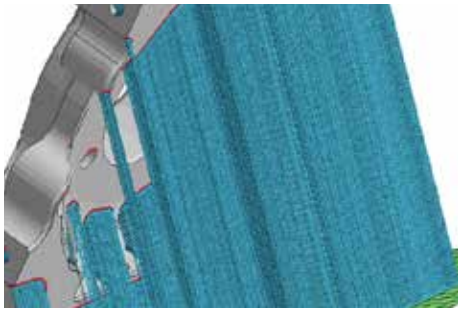
Generate forms optimized for stiffness and weight, based on the loads and constraints of the part. Quickly apply complex internal lattice structures and surface skins. Use the optimization engine to refine parts automatically and develop libraries of unique structures by combining your unique unit cells.



Process simulation

Predict and mitigate various metal laser powder bed fusion build failures before manufacturing in significantly less time than is required to build the part.

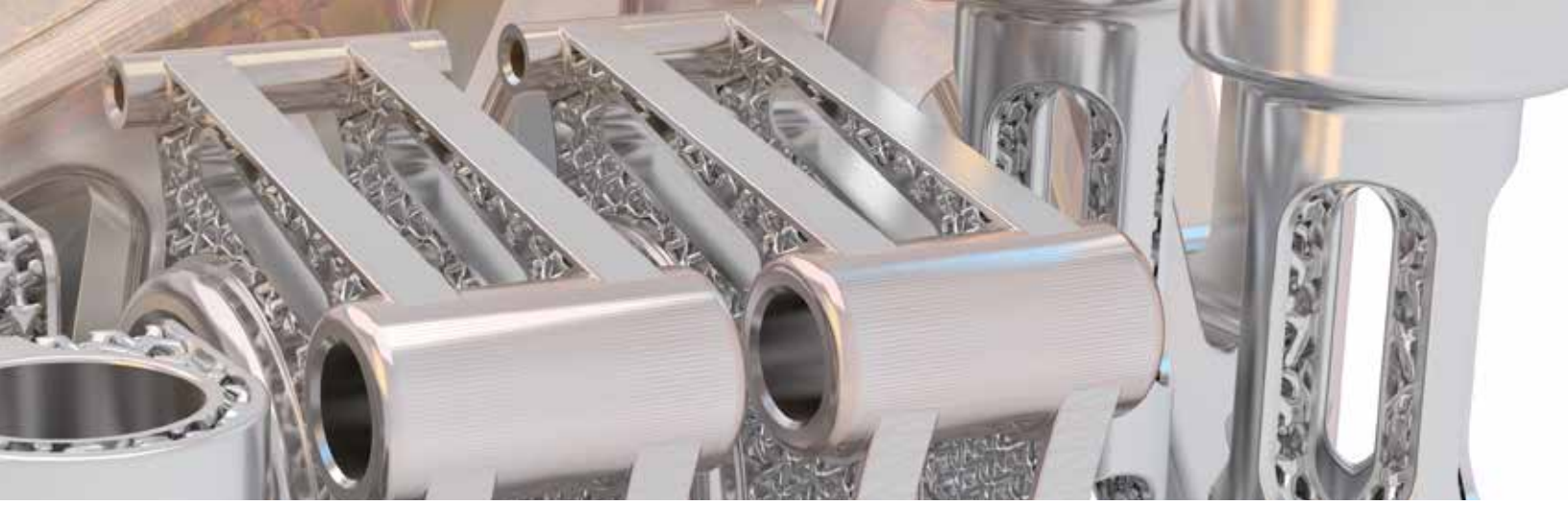
Compensate your models based on simulation results to create a modified pre-form designed to warp into the desired shape when manufactured, resulting in nearly no net distortion. Reduce the need for trial and error, saving time and money.

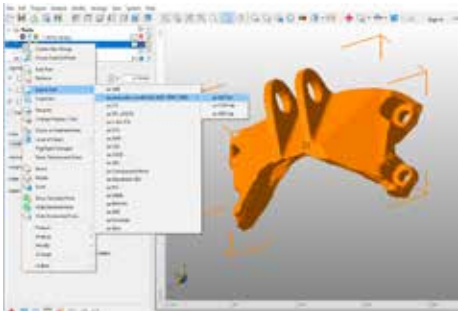


Build preparation

Netfabb includes capabilities that analyze your parts to identify areas that need support and generate build supports to help you keep preparation time and material consumption as low as possible.

Automatic packing is a fast and convenient way to find the most efficient way to pack parts on the build platform. Convert your 3D models into layers and all relevant 3D file types before exporting slice files directly to your machines.





Mesh to CAD conversion

Convert organic, free-form mesh files to boundary representation models and make them available in CAD in STEP, SAT or IGES format.

Advanced toolpaths and Lua script

Develop build strategies and define toolpath parameters for maximum surface quality, part density, and speed. Facilitate automation tasks with Lua script.

Dedicated machine workspaces

Streamline your build preparation process with integrated workspaces for over 100 machines for every AM process including EOS, SLM, HP, Farsoon, Formlabs and more.

Model import, repair, and editing

Netfabb imports models from all leading CAD systems and converts them to editable STL files, helping speed up file handling. Import files in batches to quickly analyze and repair multiple datasets in a single operation.

Robust mesh analysis and repair scripts generate watertight files, close holes, eliminate self-intersections and more; while mesh triangulation helps improve the resolution of your printed parts. Netfabb also includes a wide range of model editing tools, designed to help you create geometry for part labels or numbers.

Planning for CNC operations

Metal additive parts often require some CNC post-processing and this is best managed with a solid model. Netfabb lets you take advantage of solid modeling tools, based on Autodesk® PowerShape® technology to plan & model the near-net-shape for additive manufacturing processes. Recognize, select and edit solid features - such as suppressing holes, and thicken surfaces to add material in readiness for subtractive processes. Add datum references, clamping locations and build supports. And easily visualize where material has been added to the original model to make the near-net-shape.

“If we didn’t have Netfabb to automate a large portion of the file preparation process, each build would be substantially more time consuming and labor intensive.”

– Dan Ko
Strategic Initiatives Lead | Shapeways

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For more information visit **sourcegraphics.com/software/autodesk-netfabb/**

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