



**netfabb**®

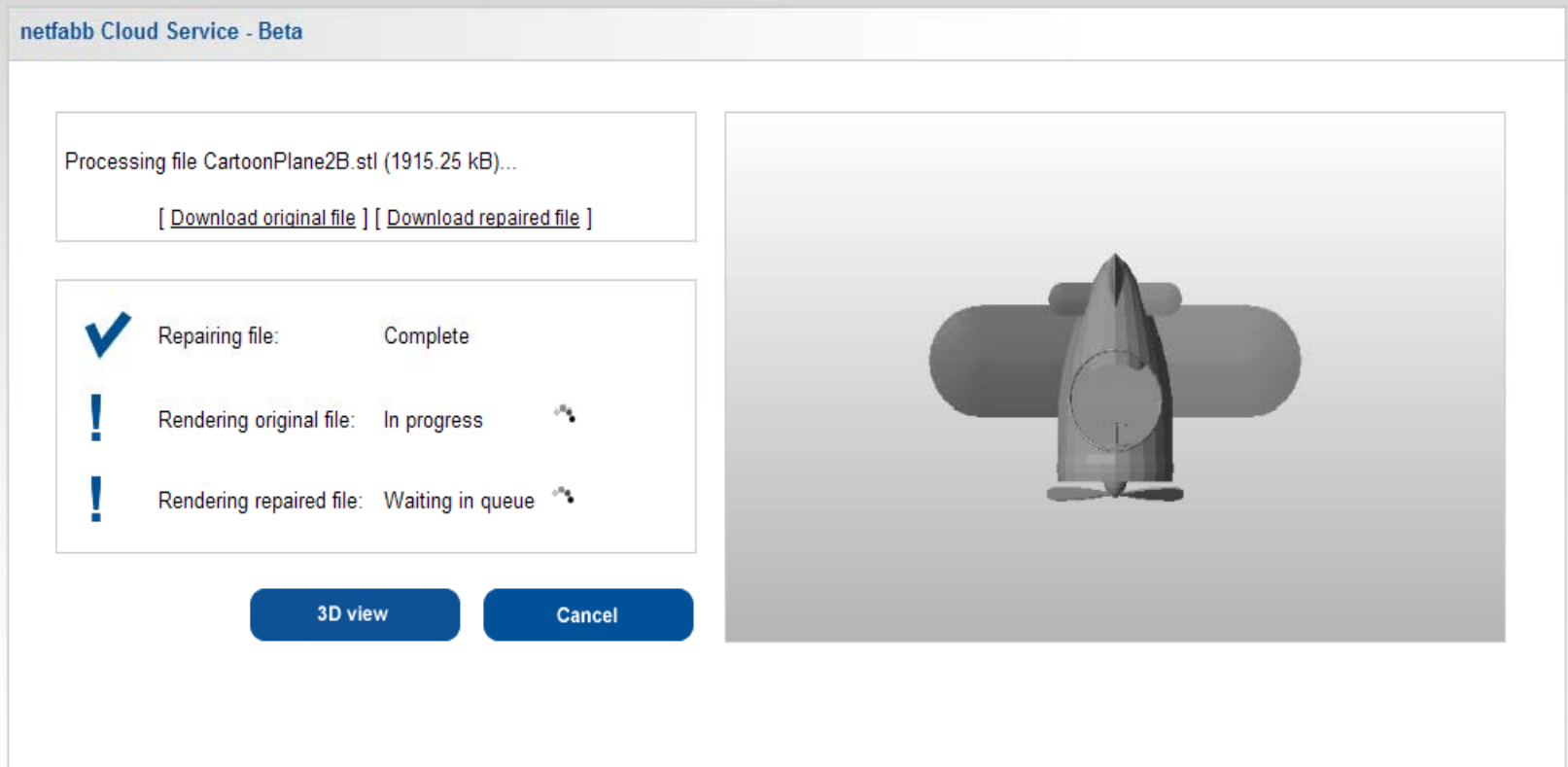
new age fabbing software

**netfabb Cloud Services**

# netfabb Cloud - automatic file fixing tools for STL data!

## netfabb Cloud Services

netfabb Cloud Services is a free file fixing tool for the world of 3D Printing, Rapid Prototyping and Additive Manufacturing. netfabb Cloud Services is a web-based automatic checking and fixing tool for STL data, the primary file format used to create physical 3D models and parts with 3D Printing, Rapid Prototyping and Additive Manufacturing.



The screenshot displays the netfabb Cloud Service interface. At the top, it says "netfabb Cloud Service - Beta". Below this, a status box indicates "Processing file CartoonPlane2B.stl (1915.25 kB)..." with links for "[ Download original file ]" and "[ Download repaired file ]". A progress table shows the status of various tasks:

✓	Repairing file:	Complete	
!	Rendering original file:	In progress	⋮
!	Rendering repaired file:	Waiting in queue	⋮

At the bottom of the interface, there are two buttons: "3D view" and "Cancel". To the right of the status box is a 3D rendering of a model, which appears to be a stylized airplane or aircraft component.

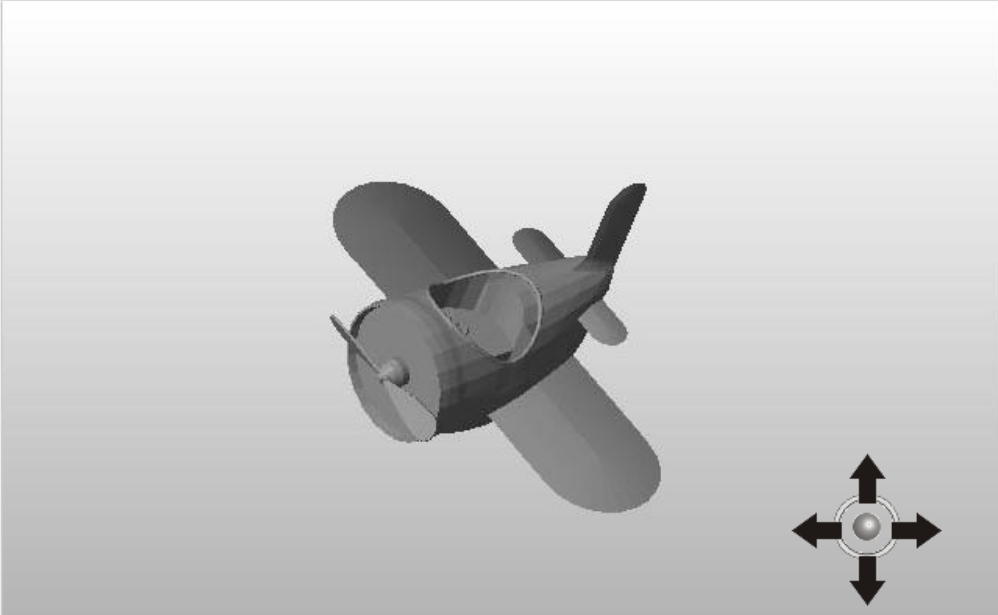
3D model courtesy of Lyall Randell

## The power inside - netfabb Cloud Solutions

netfabb Cloud Services are powered by **netfabb Cloud Solutions**, a server based business solution for automatic handling of large volumes of 3D data to enhance quality of data, response time and quoting while reducing the amount of manual interaction needed for analysis, quality control and repair of 3D data.

netfabb Cloud Solutions is a powerful tool for service providers. For example Shapeways use netfabb Cloud Solutions on their website under the name Mesh Medic. netfabb Cloud Solutions save time and money and allow for more than 95% of corrupt files to be fixed without any manual intervention.

netfabb Cloud Service - Beta



The screenshot displays a 3D model of a biplane in a central view. To the right, there are two panels: 'Original file' and 'Repaired file'. The 'Original file' panel shows the file name 'CartoonPlane2B.stl', a filesize of 1915.25kB, 7160 triangles, 35 holes, and 23 shells, with a note that the mesh is not manifold and oriented. The 'Repaired file' panel shows the file name 'CartoonPlane2B\_fixed.stl', a filesize of 369.91kB, 7574 triangles, 16 shells, a surface area of 296440.1cm<sup>2</sup>, a volume of 2755147.5cm<sup>3</sup>, and dimensions of 4373.2 x 2674.9 x 2527.0 mm, with a note that the mesh is manifold and oriented. At the bottom, there is a status bar indicating 'Status: Processing successful' and a 'Process next file' button.

Original file **3D view** **Download**

View: [CartoonPlane2B.stl](#)  
Filesize: 1915.25kB  
Triangles: 7160  
Number of holes: 35  
Number of shells: 23  
Mesh is not manifold and oriented.

Repaired file **3D view** **Download**

View: [CartoonPlane2B\\_fixed.stl](#)  
Filesize: 369.91kB  
Triangles: 7574  
Number of shells: 16  
Surface area: 296440.1cm<sup>2</sup>  
Volume: 2755147.5cm<sup>3</sup>  
Outbox: 4373.2 x 2674.9 x 2527.0 mm  
Mesh is manifold and oriented.

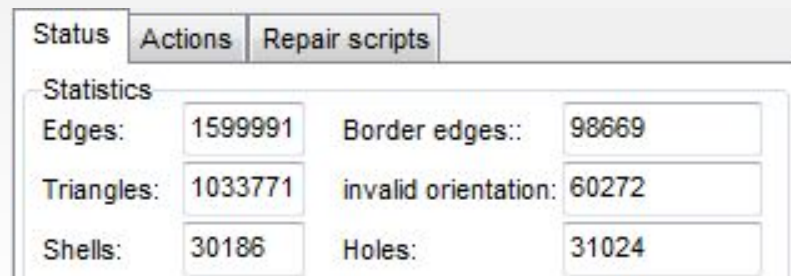
Status: Processing successful **Process next file**

3D model courtesy of Lyall Randell

## Why do you need to fix a file?

In order to manufacture a part from STL data the file need to fulfil a number of criteria for the machine to be able to identify and interpret the data correctly in order to place the build material in the right spot. If the file is bad it is difficult or impossible to generate a proper tool path for the machine. This can result in failed builds, lengthy trouble-shooting and increased costs of material. As a consequence, the machine will not be 100% successful and your development and ability to manufacture useful stuff will be slowed down. Many 3D printing service providers that allow customers to upload files to them also limit their services to not cover parts where the files are in any way corrupted. This is of course reasonable from the service providers point of view, but can become a large a hurdle and cause unnecessary extra costs for anyone who want to use such services.

The problem of bad STL's is a result from the fact that many CAD programs used to create the STL files are actually not that good at it. They produce STL files, but the files often contain holes, multiple shells, triangles with invalid orientation and other inconsistencies. Without going into detail, all of this is bad news when the data shall be interpreted by the 3D Printer and turned into a tool path.



The image shows a screenshot of a software interface with a 'Statistics' section. It contains a table with the following data:

Status	Actions	Repair scripts
Statistics		
Edges:	1599991	Border edges:: 98669
Triangles:	1033771	invalid orientation: 60272
Shells:	30186	Holes: 31024

The picture show the real result from a file converted to STL data from a widely used CAD program. The file was not usable in its original condition but could be fixed by netfabb Cloud Solutions.

## Fix files anywhere!

Manual fixing of files is hard and time-consuming and require special skills and tools. There are free tools like netfabb Studio Basic as well as professional tools like netfabb Studio Professional but to fix a file you need the software to be installed on the computer you are working at.

netfabb Cloud Services enable a user with a web browser running on any platform and any operating system, including Apple Mac OS and Linux, to upload an STL file to the netfabb server and having the file fixed by a sophisticated fixing algorithm.

This is it – you can now get your files fixed with no need to purchase and learn any file fixing software. Just go to <http://cloud.netfabb.com> and get started. When the upload is completed the user will get a link to follow the status of the fixing process and once the file is fixed the user will receive an email with a download link for the fixed file.

To make the file fixing capabilities of netfabb Cloud available “on the go” we have even included a link to netfabb Cloud Service in the netfabb Mobile iPhone application to make it possible to download, check and repair files from your iPhone.

## **netfabb Cloud Solutions**

If you are running a service bureau you might like to offer similar services on your own site and automatically connect uploaded files with quoting and quality management, netfabb Cloud Solutions can take care of exactly that

netfabb Cloud Solutions can be installed on your own server or subscribed as a service. Please feel free to contact netfabb at any time to discuss the various alternatives for how you can take advantage of the netfabb Cloud Solutions in your business.

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