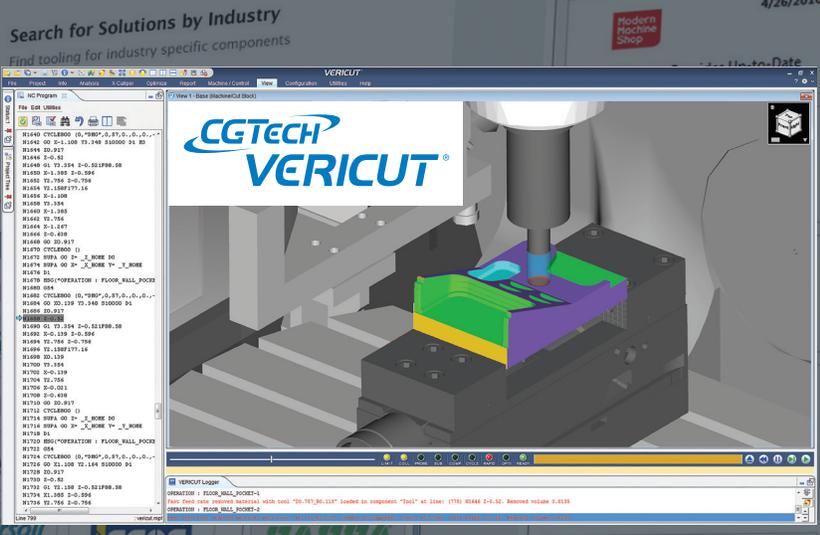


Bridge the latest tooling data across Mastercam and VERICUT using MachiningCloud



Create a fully digitized shop floor process that can easily verify and optimize your NC code's potential before machining actually occurs

Seamless, highly precise tooling data is vital during CAM programming and CNC simulations, ensuring that your NC program replicates actual machine conditions on the shop floor. An NC program that contains inaccurate tooling data will not only invalidate a CNC simulation, but will also lead to catastrophic failure if deployed in real world machining environments.

Accelerate CAM tooling selection and optimize CNC performance

MachiningCloud interfaces with both Mastercam and VERICUT, ensuring seamless data migration across both CAM tooling setup and CNC simulation runs. With MachiningCloud, CAM programmers have access to the latest tool geometry, 3D models, feeds & speeds, and inventory availability from world-leading manufacturers.

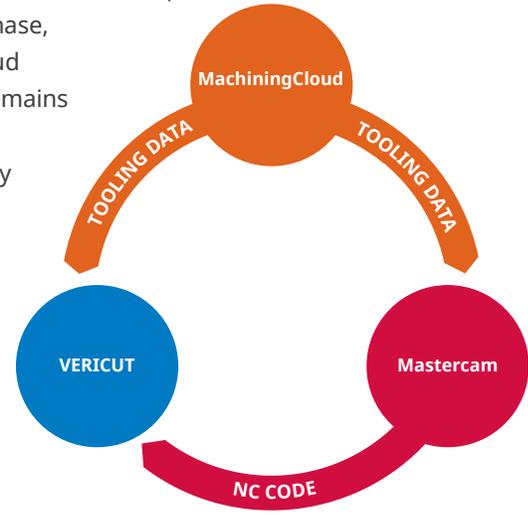
To achieve the highest quality toolpaths possible, MachiningCloud, CAM, and CNC simulation applications work in unison, bridging tooling data efficiently across each stage of NC program development. This results in a tightly integrated workflow that guarantees optimal toolpaths that are based on real world cutting conditions. MachiningCloud's data is ISOPlus, which means data is compliant to ISO 13399 standards, as well as GTC, MTConnect, STEP and DIN4000. The ISOPlus data ensures that all tooling data, regardless of brand, will be in the same format.

Using MachiningCloud, Mastercam, and VERICUT in unison puts reliable manufacturer data to work:

- Consistent, reliable tooling data
- Efficient CAM and CNC simulation workflows
- Toolpath optimization
- Improved productivity

MachiningCloud – Mastercam – VERICUT Workflow

Tooling data is sourced in MachiningCloud, setup and validated in Mastercam, and final G-code is ready for CNC simulation, verification, and optimization in VERICUT. Across each phase, MachiningCloud tooling data remains consistent and readable, ready for use in both CAM and CNC simulation applications.



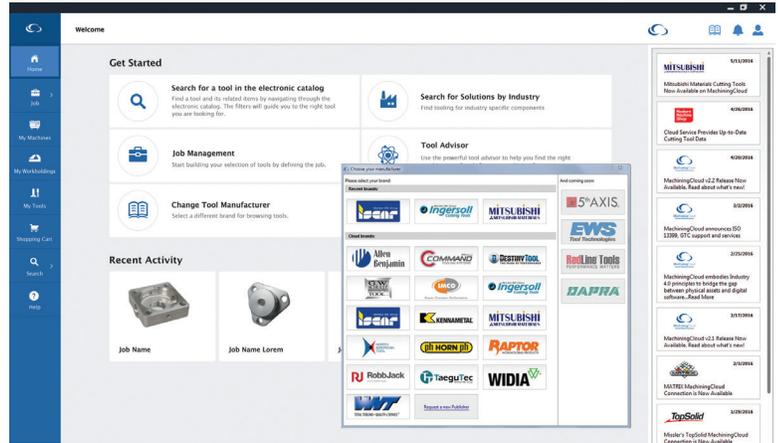


Using the MachiningCloud application with Mastercam and VERICUT

Step 1 Quickly source and export tooling data from MachiningCloud

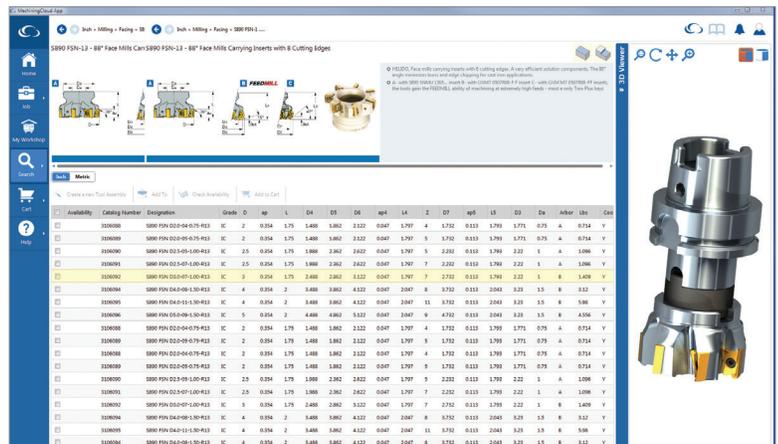
Search

- Dynamically search tooling data and availability that's direct from manufacturers, continuously updated and improved by MachiningCloud for seamless CAM imports



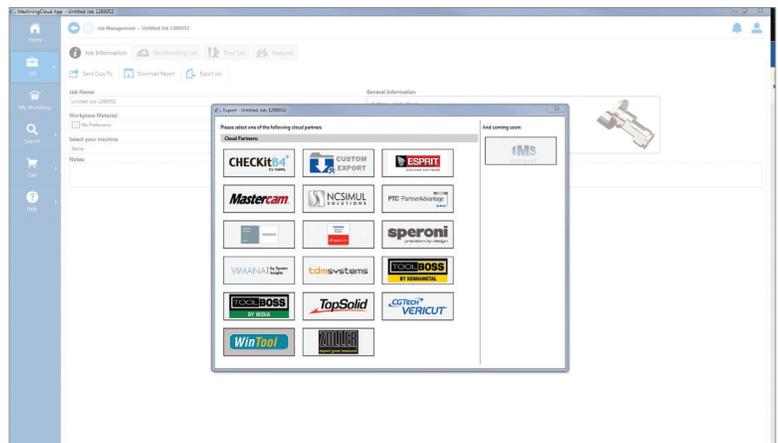
Prepare

- Visualize tool assemblies with 3D Viewer and achieve accurate, safer CAM simulations
- Validate assembly components, modify projection values, and get manufacturer recommended feeds & speeds, torque, power, and more



Export

- Integrated, cloud-based CAD capabilities build and package assemblies for you, eliminating the need for users to download each tool individually for final assembly
- Easily export an entire data package that combines an array of industry recognized file formats, from dwg to xml, that's visible and ready to use in virtually any CAM software
- MachiningCloud maps all incoming manufacturer data to the latest industry standards

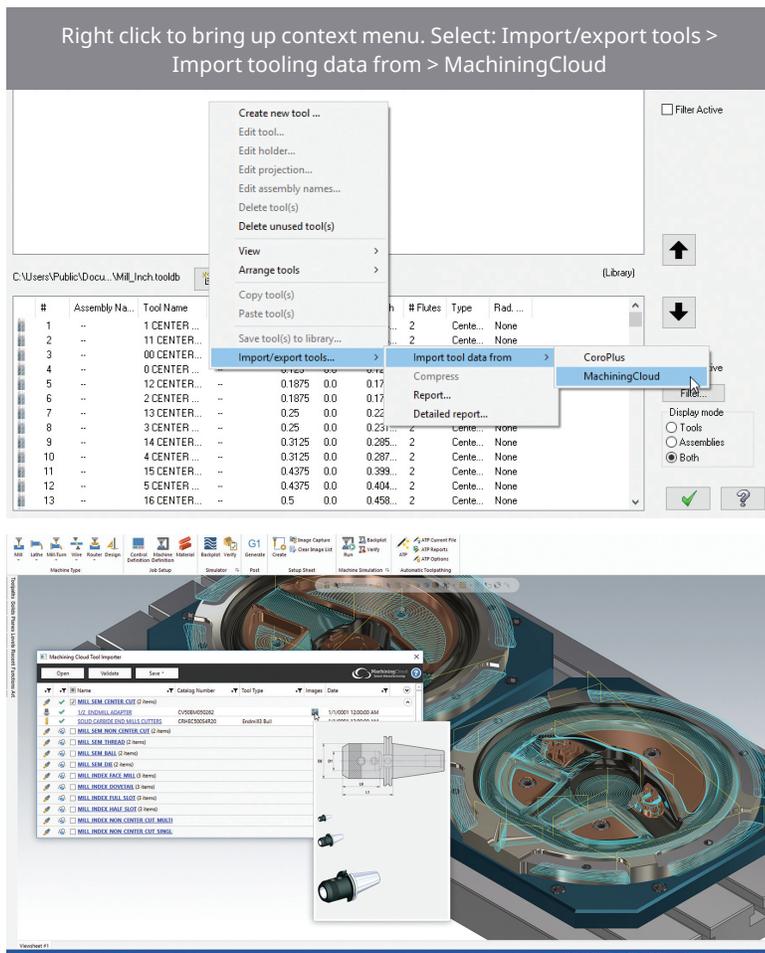




Step 2 Ensure precise tool setup in Mastercam

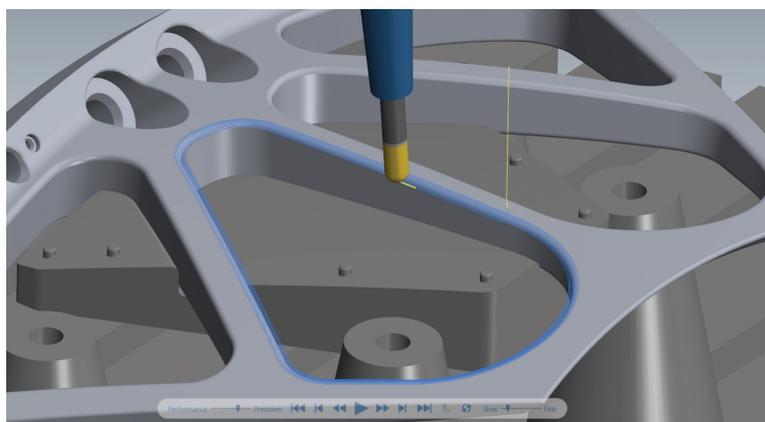
Import

- Import the new tool assemblies to the part via Mastercam Tool Manager
- Preview tool assembly and component data directly within Mastercam
- Remove the burden of searching and manually entering tooling data after exporting a job from a CAM application such as Mastercam



Program

- Create toolpaths via CAM programming and perform initial simulations
- Ready your NC program file for import into VERICUT

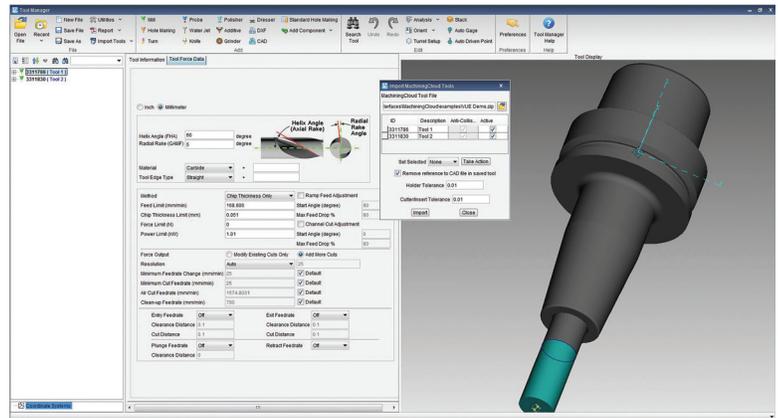




Step 3 Simulate and optimize NC program data with VERICUT

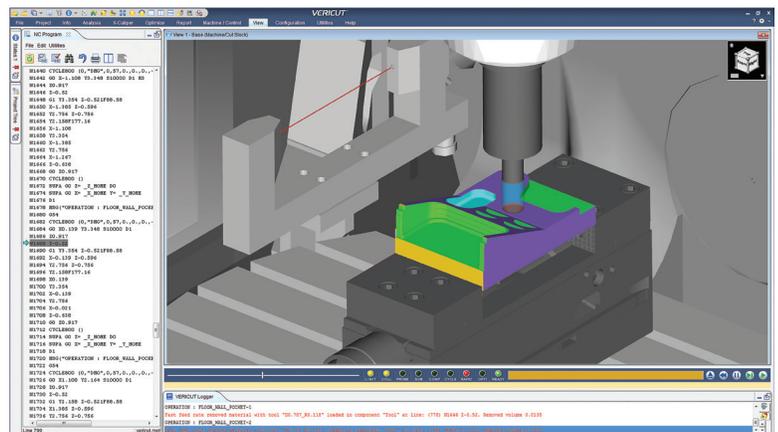
Import

- Import tooling data directly from MachiningCloud's file packages
- Tooling data is instantly setup, pre-populated, and ready for simulation in VERICUT without the need for manual entry



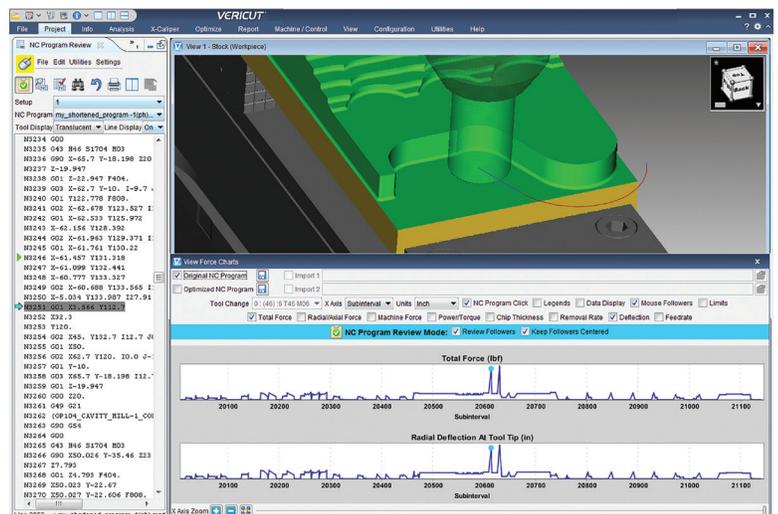
Simulate

- Verify an NC program's individual operations, a series of operations, or complete NC programs based on certain, highly precise manufacturer tooling data for safer, more accurate simulations



Optimize

- Optimize toolpaths to create the most efficient NC programs possible
- Leverage VERICUT to simulate actual cutting conditions and automatically adjust feeds and speeds when necessary
- Use VERICUT's OptiPath or Force optimization features to enhance tool life & performance





MachiningCloud and VERICUT result in the most accurate, realistic cutting simulations possible

Both MachiningCloud and VERICUT support an array of industry-recognized CAM programming applications. Post processed NC code from CAM software is only as good as the application logic itself prior to importing into a CNC simulation program such as VERICUT. CAM software doesn't always take into account real world machining factors that can truly make the difference to a successful project.

It's critical that a CNC machine's actual setup and cutting conditions are replicated accurately in order to confirm a successful NC program. With VERICUT, CNC simulations are emulated to match the machine's control by reading the actual NC code and behaving exactly like the physical CNC machine residing on the shop floor. VERICUT bridges the gap between software theory and physical reality, proactively detecting potential collisions and NC program mistakes without the need for a prove-out.

With MachiningCloud, achieve peace of mind knowing that concise, standardized 3D models and manufacturer tooling data are always imported into VERICUT CNC simulation software - regardless of what CAM software was used to develop an NC program.

Agnostic, up-to-date manufacturer tooling data for process efficiency

- **Unified interface**
Seamless and reliable cutting tooling data transitions between MachiningCloud and VERICUT CNC simulation software
- **Consistent data integrity**
A uniform, manufacturer-agnostic data stream for VERICUT's CNC simulations that's always up-to-date and geared for quality
- **Faster tool due diligence**
Eliminate manual input and reduce the time it takes to get the job done right the first time
- **Seamless tooling data setup**
Tool properties are automatically populated and ready to

go without manual entry

- **Accelerate time to market**
Reduce setup and development time in order to speed up delivery schedule
- **Higher quality toolpaths with less setup time**
MachiningCloud's manufacturer recommendations result in easier tool validations in CAM software and highly precise CNC simulations in VERICUT
- **Optimizes machine performance**
Manufacturer tooling data used in VERICUT will help to maximize equipment capabilities and prolong service life
- **Improved cycle times and increased productivity**
Increase productivity and free up shop floor resources

MachiningCloud and VERICUT work in unison to:

- Increase productivity through optimization
- Reduce programming development time
- Shorten cycle times
- Lower process variations
- Prolong machine life
- Improve part quality
- Maximize tool capabilities and tool life

Reliable manufacturer data helps recreate actual cutting conditions

MachiningCloud is an application agnostic source for the latest tooling data, working across all aspects of the NC program development process. Combined with VERICUT's simulation, verification, and optimization capabilities, CAM programmers can rest assured that they're replicating real world cutting conditions thanks to the most up-to-date, standardized manufacturer data made possible by MachiningCloud.



About MachiningCloud

MachiningCloud is an independent provider of CAM tooling data from the world's leading suppliers. We deliver what users are clamoring for – instant access to the most current tooling data, delivered right to their desktop. We've integrated a high power toolset that gives users the ability to put tooling data to work right on the spot – elevating their workflow to a new level of efficiency and precision for CAM programming.

The MachiningCloud community is growing exponentially each month as new partners come online. We continually encourage leading brands worldwide to publish their product data on MachiningCloud. If you don't see your favorite cutting tool brand in our library yet, we encourage you to contact your tool supplier to join MachiningCloud.

For more information about MachiningCloud, Smart Manufacturing and Industry 4.0 solutions, please visit www.machiningcloud.com.

