# 3DCS Distributed Computing
## Use cloud computing powered by Parallel Works to improve analysis speeds



## Increase Your Analysis Speed with Distributed Computing

Parallel Works is an innovative cloud-based platform that empowers users with "personal supercomputers". The platform enables users to seamlessly run large-scale jobs in parallel - across hundreds to thousands of computer cores - leveraging the scale of the cloud at the click of a button.

### What Is Distributed Computing?

Distributed computing is a model in which an analysis is broken down into multiple threads. The threads are run on separate compute nodes on the cloud. Once complete, the results are combined to deliver a comprehensive output. By processing each thread in parallel, it increases the speed of the analysis - delivering results fast.

### What Are the Inputs and Outputs?

You only need two things to get started with Distributed Computing

1. Distributed Computing Powered by Parallel Works Account
2. Your Model's WTX File - Export from any version of 3DCS

Your output will be an HST file that can be downloaded as a basic report, or a raw file to import into 3DCS and display your results.

### What Are the Benefits of Using Distributed Computing

▶ Speed: Run analyses in parallel to speed time to solution

▶ On-demand license: Need to work on your model on your desktop while a job is running? Offload it to the cloud and continue to use your license to model.

▶ Unlimited hardware: Scale-up in the cloud based on the need of your study to speed up big jobs.
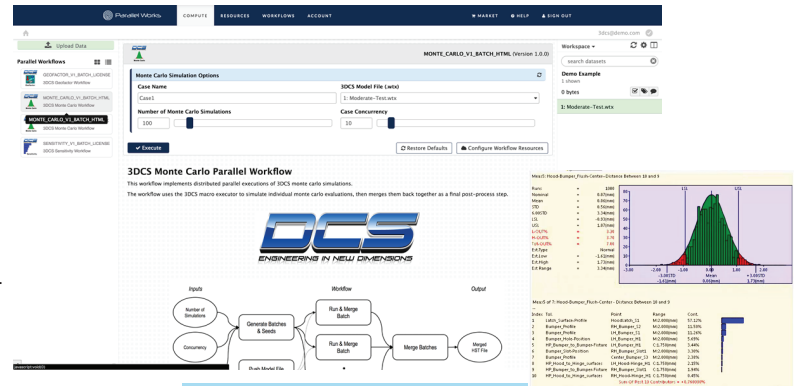
## Key Product Highlights:

**Free Up Local Machines**
Use cloud computers rather than your own to run the simulation, freeing your local machine to continue your work.

**Run Simulations Simultaneously**
Get your results faster by runing your simulations, Monte Carlo, GeoFactor and Senstivity, at the same time.

**Increase Speed as Needed**
Scale your computing resources up or down as needed based on your analysis. More compute power equals faster run times.

**State of the Art Resources**
Use the latest and greatest computing hardware on the cloud instead of local machines that may be slower.

**Run Advanced Analysis**
Run FEA Compliant Modeler and advanced analyses quickly.

**Utilize Shared Memory for More**
Take advantage of the new Shared Memory feature for even more speed gains.

**Easy Interface - Start Right Away**
With an easy interface, and no setup costs, you can start using Distributed Computing right away.

+248-269-9777   |   sales@3DCS.com   |   www.3DCS.com

**Variation Analyst**

# Quickly Run Your Analysis and Get Your Results

## Easy Inputs Make Setup a Breeze
With no setup costs, and three simple inputs, launching your analysis in the cloud is easy. Quickly setup multiple different models or types of analysis and let them all run in the cloud.
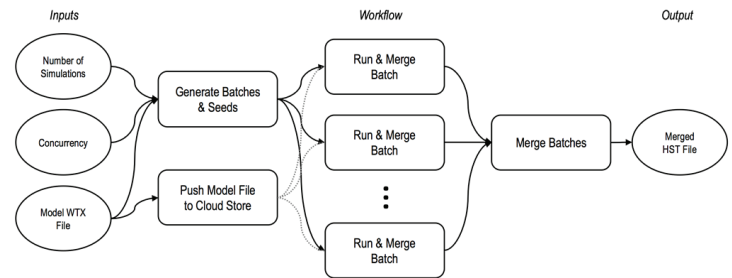


The Process Workflow - Inputs and Outputs

## Analysis Output When You Need It
Quickly and easily manage the number of computers (concurrency) in the cloud to run your analysis and get results when you need them.

## Run Multiple Analyses Simultaneously
Run all of your models, and all of your simulations at the same time instead of in serial. Simulation, GeoFactor and Sensitivity can all be run at the same time, for multiple models and iterations.
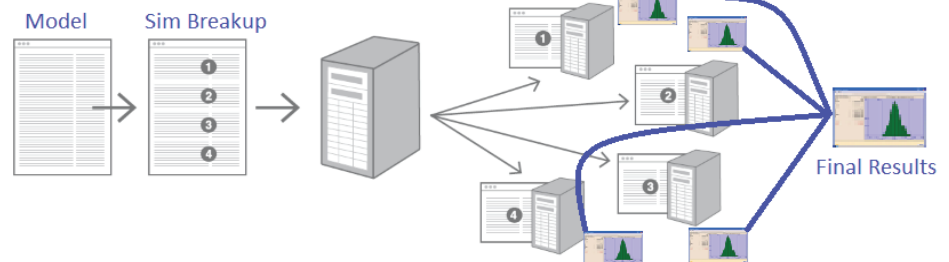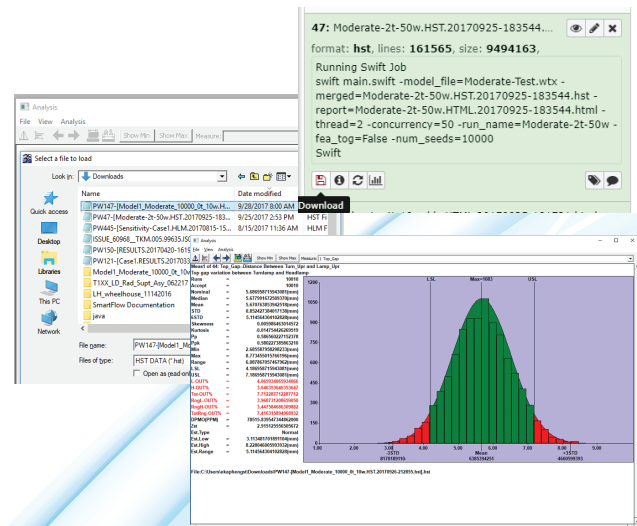


Distributed Computing distributes the analysis amongst multiple computers in the cloud

## Free Up Local Resources and Licenses
Using cloud resources frees up your local machines and your local licenses. Running analyses using Distributed Computing does not require any additional licenses and does not freeze up any of your licenses while running. Continue working while your analyses run in the background.

## Get All of Your Analysis Outputs
You can download them as a report to share, or as an .HST file to bring back into 3DCS and showcase with your model.

## No Setup Costs - Purchase More Credits as Needed
Use your Credits as you need them, purchasing more when you run out. Buy as many or as few as you like, with no required minimum, contract or committment.



Get all of your HLM, Sensitivity and Simulation Results

DCS has been supporting quality management in industries including automotive, aerospace, medical device, electronics and industrial machinery for over 20 years. DCS solutions are used daily by companies like Airbus, BMW, GM, LG, Nissan, Phillips, Sony, Textron Aviation and VW. By applying DCS's 3D Model Based environment for Predictive Variation Analysis and Responsive SPC, manufacturers have reduced quality costs related to yield, scrap, rework and warranty issues.

**DCS** ENGINEERING IN NEW DIMENSIONS

CERTIFIED Gold Product — 3DS SOLIDWORKS

SOFTWARE PARTNER V6 Partner — 3DS

SOFTWARE PARTNER V5 Gold Partner — 3DS

PLM Market Place — 3DS

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