

RUNNING AN ABAQUS JOB ON THE CLOUD

Realistic Simulation is becoming an increasingly integral part of the product development process and companies are realizing the advantages of performing simulation throughout the development process as opposed to simply validating their final design with simulation.

As the need for realistic simulation continues to increase, companies often find themselves with insufficient software licenses when there is an unpredictable surge in simulation requirements. In order to address this need, we have introduced on-demand licensing for Abaqus POWER'BY 3DEXPERIENCE on the cloud. On-demand licensing allows companies to cost-effectively meet their peak needs for both software and hardware.

Convenient access to the on-demand license model is provided through the web-based Abaqus Study application. Getting started is as simple as logging on to 3DEXPERIENCE from a browser, then clicking the Abaqus Study icon. Everything is web-based so no installation is required.

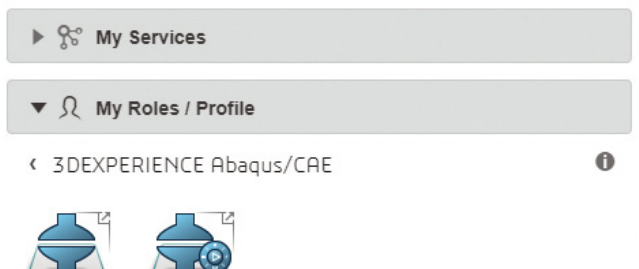


Figure 1: Select V+R quadrant in the compass to access Abaqus Study application

The rest of the workflow can be broken down into 4 simple steps.

Step 1: Upload an Abaqus input file to a secure project space on the DASSAULT SYSTEMES Cloud. The input file can be generated using Abaqus/CAE or any other pre-processor preferred by the user.

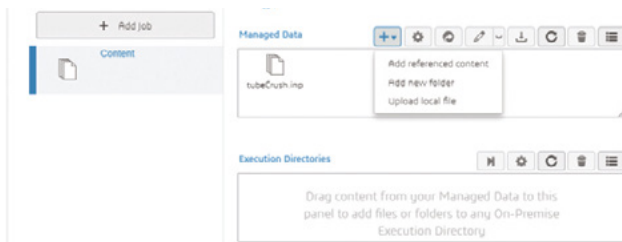


Figure 2: Content tab to upload the Abaqus input file

Step 2: Configure the simulation from the Run Options tab in Abaqus Study.

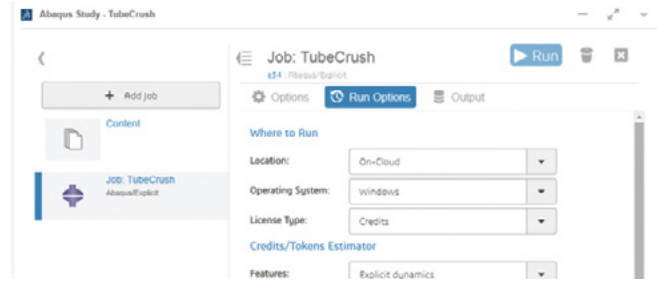


Figure 3: Define Run Options

Available options include where the simulation will run, the type of license to use, and how much hardware should be used. Abaqus Study allows users to run simulations on the Dassault Systèmes cloud or their own local hardware. Available license types include the on-demand credit model and the traditional token model. The Run Options tab also provides a tool to estimate license usage.

Step 3: Run the simulation. Simulation progress (e.g. sta/msg/dat files) can be monitored within Abaqus Study as the simulation executes.

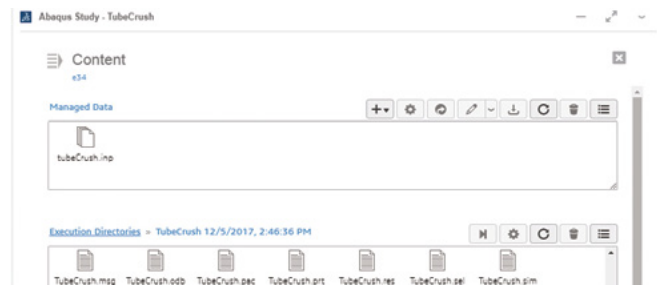


Figure 4: Monitor simulation job progress

Step 4: Analyze results after the simulation has completed. One option is to download the Abaqus results file (odb) and use Abaqus/Viewer for local post-processing. Another option is to perform lightweight visualization using the browser-based 3DPlay application (Figure 5). A final option is purchasing Simulation Results Analyst, which is a Role that provides remote high performance visualization from the cloud.

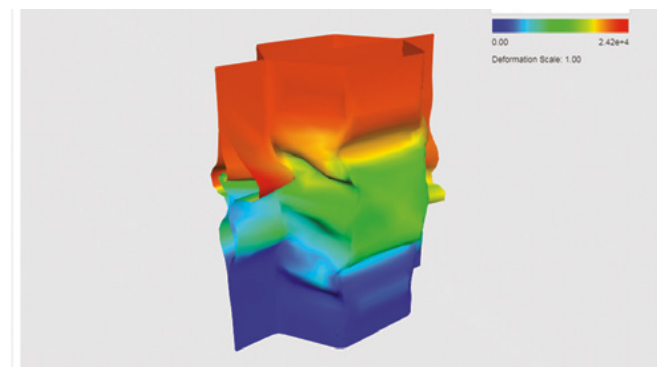
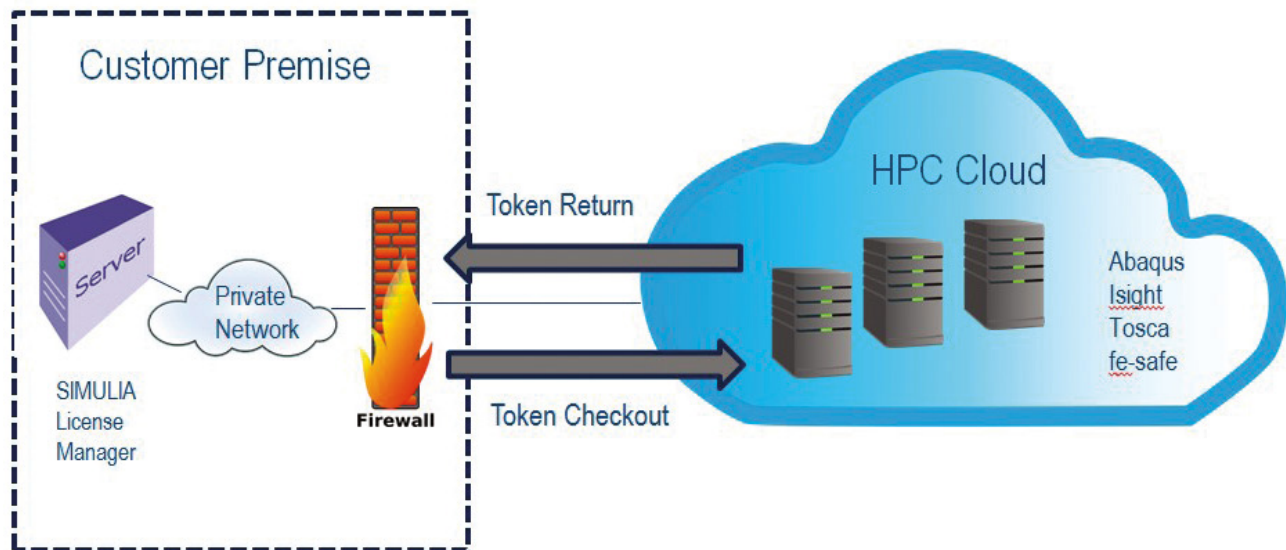


Figure 5: Results visualization within 3DPlay application

USING YOUR SIMULIA PORTFOLIO LICENSE ON THE CLOUD

Given the increasing adoption of the cloud for HPC computing, SIMULIA customers may want the flexibility to use a cloud provider to run Abaqus, Isight, Tosca or fe-safe. Utilizing a cloud provider eliminates the need to procure additional on premise compute resources that may not be needed on an ongoing basis. This option is available through one of the cloud providers mentioned later in this article using a bring your own license (BYOL) model approach. The SIMULIA software and tokens must be purchased from Dassault Systèmes, not the cloud provider.

Quite simply, this works by having the compute resources in the cloud and your existing license server on your corporate network. To run Abaqus, Isight, Tosca or fe-safe in the cloud, simply direct the software to check out tokens from your license server as depicted below. It is important to note that only standard or extended licensing tokens are supported in this scenario, not the recently announced **3DEXPERIENCE** Abaqus/CAE offering.



GOMPUTE A GRIDCORE COMPANY

Founded in early 2002, Gcompute has become a leading simulation and HPC solution provider. Gcompute is headquartered in Gothenburg, Sweden and has local offices in Lugo, Spain; Stuttgart, Germany and Durham, North Carolina, USA. Gcompute's team consists of engineers, computer scientists and CAE experts who bring the latest HPC technology to customers around the world. Gcompute provides services worldwide, with solutions developed for geographically distributed engineering teams. With Gcompute the customer gets a ready-to-use platform in an HPC system configured only for CAE. Gcompute owns and operates a secure infrastructure with their own software platform, which is focused to provide HPC for CAE.

For More Information
lago.fernandez@gompute.com

iSiD IT Solution Innovator

Information Services International-Dentsu, Ltd. (ISID) provides consulting, system construction, package software, integration and operational management services to support the business areas of product development, manufacturing, service, sales and marketing for the manufacturing industry. ISID provides its services to Japanese domestic and worldwide Japanese manufacturing companies are ISID customers. As a pioneer of CAE solution providers, ISID provides user support services with a rich set of high-function analytical software, as well as for manufacturing companies in various fields. PLEXUS CAE provided by ISID is a SaaS system that facilitates analysis and execution of Dassault Systèmes products such as Abaqus, XFlow, 3D Electromagnetic Simulation Software, etc. in the cloud environment. ISID provides flexible customization and total support corresponding to individual requests.

For More Information
g-plexuscae-sales@group.isid.co.jp