Release Notes

Version 2.0

Flood Cloud

Innovation by **Jacobs**

Flood Cloud release notes

Flood Cloud v2.0 is a standalone version of the Flood Cloud tool included within Jacobs' Flood Modeller software. This document contains the following sections:

1. Flood Cloud User Interface v2.0
2. Flood Cloud Requirements

Flood Cloud User Interface v2.0

The following features and changes are implemented in version 2.0 of the Flood Cloud standalone interface:

1. Flood Cloud has been moved to Google Cloud (from Amazon Web Services). As a result, the hardware now accessed by Flood Cloud for simulations will be of a higher specification. This improves simulation speeds of models run using Flood Cloud.

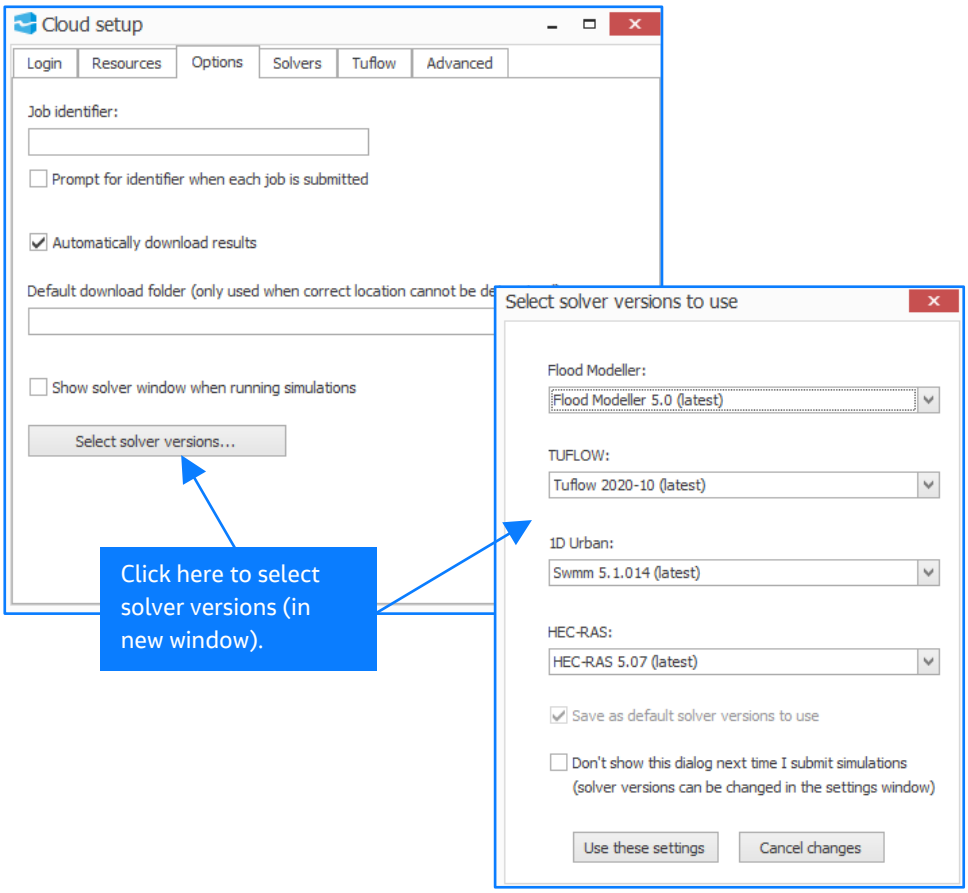
   For the default compute type, Flood Cloud uses compute optimized machines based on the latest generation Intel Scalable Processors (Cascade Lake), They offer up to 3.8 GHz sustained all-core turbo performance. These machine types offer much more computing power, run on a newer platform, and are generally more robust for compute-intensive workloads than standard machines. The machines have 4 CPUs and 16GB of memory.

   For users wishing to run simulations on a GPU, Flood Cloud uses a NVIDIA Tesla V100 GPU card.

2. The Flood Cloud pricing structure has been revised to charge users by the minute (instead of by the hour). This makes shorter simulations (i.e. those less than one hour) more cost-effective as you are only charged for what you run.

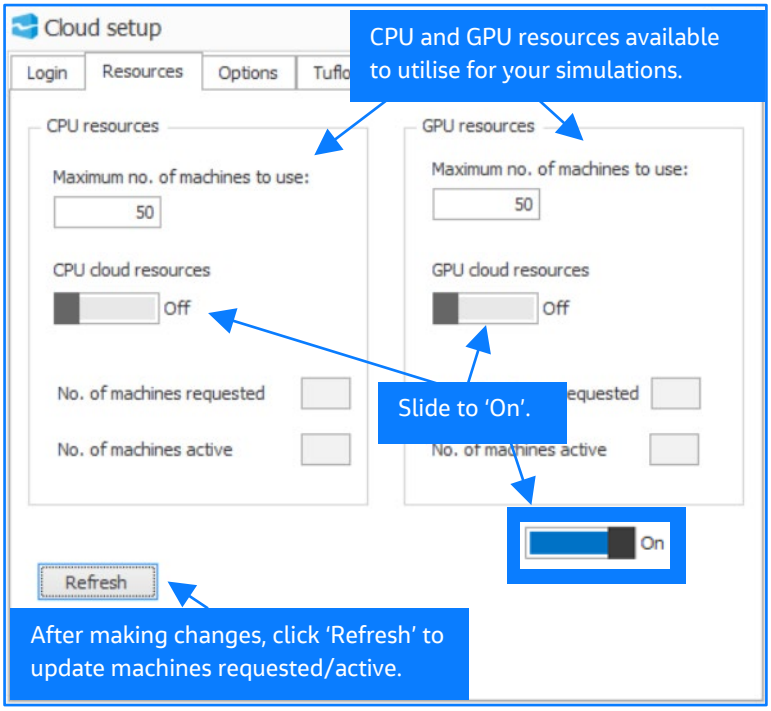
3. Flood Cloud has been enhanced to enable users to select the solver version they wish to utilise for a batch of model simulations.

   Required solvers for each model type are selected via the Options tab of the Flood Cloud settings window, as shown below:

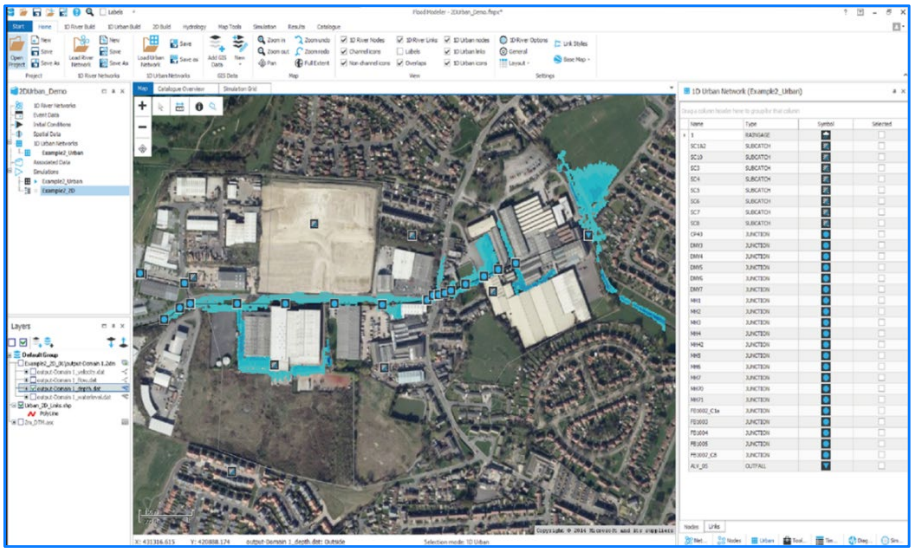


4. Flood Cloud has been enhanced to add the option of running Flood Modeller linked with TUFLOW HPC (GPU) and TUFLOW HPC (GPU) standalone simulations on GPU processors in the cloud. It will allow other model types compatible with GPU to also be run in this way.

   The Flood Cloud settings tool has been modified to enable you to select whether to utilise a CPU or GPU processor in the cloud. On the 'Resources tab' of the 'Setup' window simply slide the on/off switch to the 'On' position, as shown below:



5. Flood Cloud has been enhanced to enable the running of Flood Modeller 1D urban and 1D SWMM simulations (i.e. drainage network models). Flood Modeller 1D Urban models may be standalone or dynamically linked to Flood Modeller 2D.



6. The packaging functionality utilised by Flood Cloud has been enhanced in tandem with other developments to be compatible with the new modelling solvers added to Flood Cloud v2.0, i.e. TUFLOW HPC, Flood Modeller 1D urban and SWMM.

Flood Cloud Requirements

The following are required on your system in order to run Flood Cloud v2.0:

1. .Net Framework v4.7.2 or later (note this is included within the Flood Cloud installer and so should be added to your system automatically if not already there).

2. An internet connection is required, preferably high-speed, as significant volumes of data will be uploaded and downloaded.

3. HEC-RAS v5.07.installed locally (for running HEC-RAS simulations only, either running in the cloud or locally in test mode).

4. Test mode in Flood Cloud will require Flood Modeller to be installed locally, preferably v5.0 (as this works irrespective of any licence being present).

   Versions of Flood Modeller earlier than v4.3 will not work with Flood Cloud (versions 4.3 to 4.5 work with Flood Cloud test mode, but with differing licence requirements – contact Flood Modeller Support for details).