

## "Cloud" Service for Thermophysical Properties of Working Fluids

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Computer simulation of heat and mass transfer or energy conversion needs special software which enables to calculate thermophysical properties of working fluids. Such software should be installed on a computer and *needs to be updated periodically*. It is mainly due to the fact that new working fluids and formulations emerge. In addition, errors and inaccuracies in existing computer programs take place, their application domains are extended, and their performance is improved. Such programs are also continuously updated due to changes made in the hardware and operating system software. Users of computer programs on properties of working fluids frequently fail to notice these changes and work with outdated versions. Also, users face additional difficulties if they change their computer and/or operating system: old computer programs cannot be installed and started any longer. Besides most such programs have quite narrow possibilities of their further application in computer simulation. Moreover, it is not possible and/or unreasonable to save in one program or one computer data about all existing working substances. In view of what is said above, and taking into account that at present almost all computers have constant high-speed connection to the Internet, a new technology for "cloud" functions on properties of working fluids is proposed. The technology has been successfully tested on the Internet server located at [www.vpu.ru/mas](http://www.vpu.ru/mas). The calculation server proposes three options of using "cloud" functions: on-line calculations, download and reference. Online resources give a possibility to do "cloud" calculations of thermophysical properties in an interactive mode in accordance with input data of a user. The procedure of downloading enables to download such functions on personal computers. The reference procedure gives a possibility to do Internet reference to the functions on properties of working fluids for developing further calculations in processes of heat and mass transfer or energy conversion.