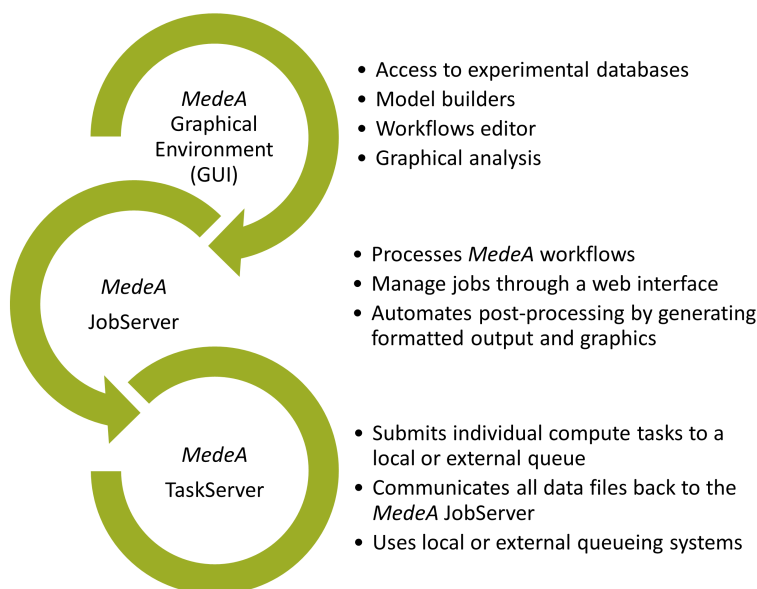


## Overview of MedeA Installation

The three-tiered architecture of *MedeA* consists of the *MedeA* graphical environment (GUI, main tier), the JobServer (middle tier), and the TaskServer (end tier).

The middle tier or the JobServer is the central hub for controlling computational jobs, job pre-processing, and job post-processing. The JobServer maintains a database of job-related data and stores computational results on disk. A *MedeA Job* is a workflow or protocol generated by a *MedeA* compute engine GUI or by the *MedeA* flowchart editor. A typical *Job* may generate one or multiple tasks using *MedeA* compute engines.

The end tier or the TaskServer submits individual tasks, parts of a *MedeA Job*, to the internal queuing system of *MedeA* or to an external queuing systems such as LSF, PBS, or similar schedulers. One or several TaskServers can be configured and connected to a JobServer. All communication between a TaskServer and the GUI flows through the JobServer.



The three tiers can be installed on the same or different machines; there is no conceptual difference between running the GUI, JobServer, and TaskServer on one laptop or using separate machines.



A single installation ISO image allows installing the *MedeA* GUI, JobServer, and TaskServer (including the *MedeA* compute engines *VASP*, *LAMMPS*, *GIBBS*, *Gaussian*, and *MOPAC*) on either Windows or Linux operating systems. *MedeA* uses an integrated version of SQLite to manage experimental databases, code specific data, and data generated by the user.