Communication between Automator Modules

Protocol

For Automator with used essentially two protocol : **UDP and TCP**

- **TCP**: It's a secure connected communication. We used it when we want the response immediately and when we must send many data.

- **UDP**: It's a not secure, not connected communication. We used it when we want don't need the response immediately. The size of the package is limited.

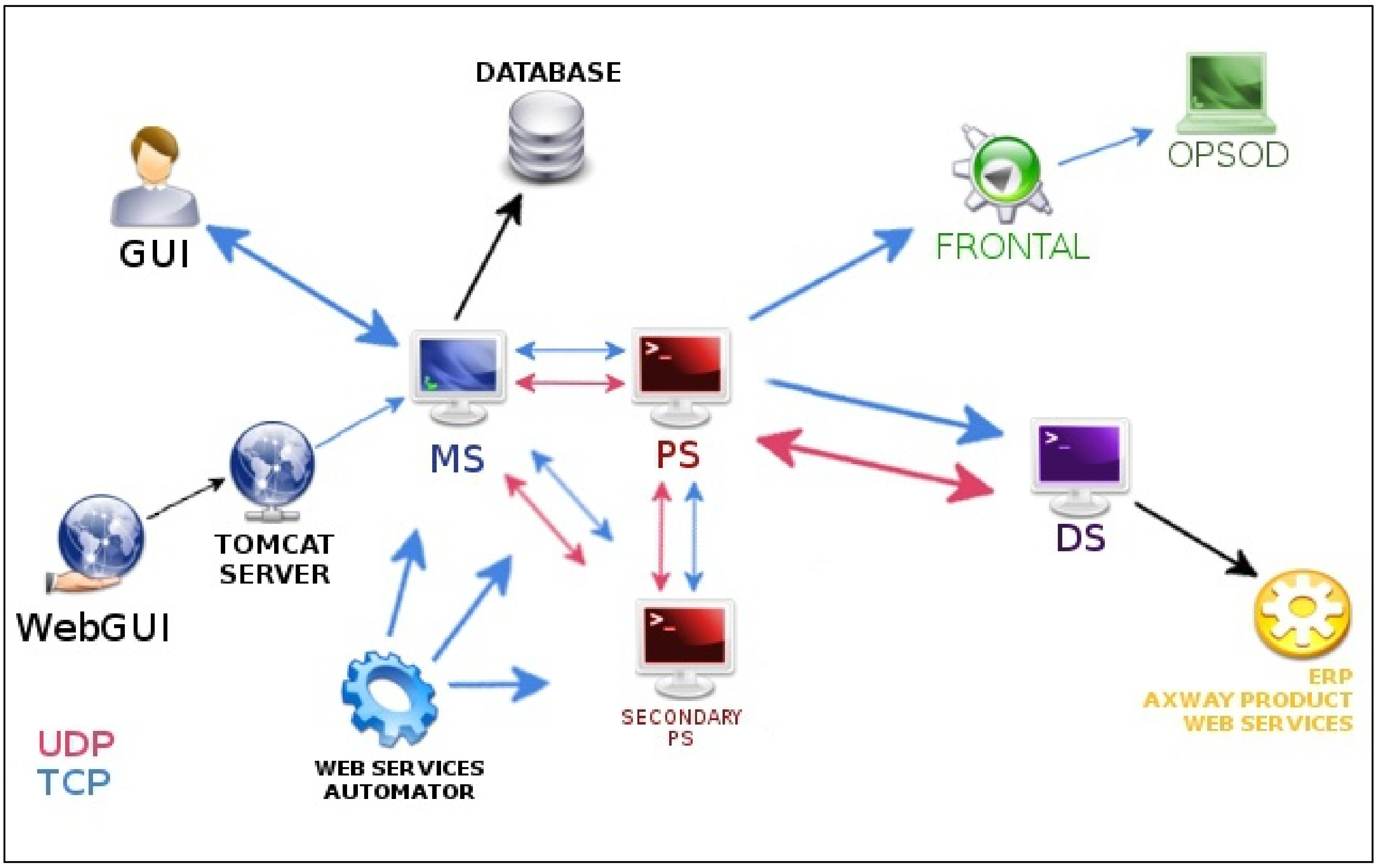
UDP work faster than TCP.

In Automator, we implement an algorithm to secure the UDP:

- The source send the UDP to the destination
- The destination send an UDP to the source to confirm the receipt
- The source set the UDP at treat. If the source don't receive the confirm UDP it make retry.

Communication architecture

This is the communication architecture between modules:



MS = Modeling Sever **PS=Production Server** **DS=Domain Server**

Main communication examples:

- GUI → MS (**TCP**): Gui make transaction to MS when we make actions in GUI (modeling, create instances, etc ...)
- MS → GUI (**TCP**): MS make transaction to GUI to send instances/objects status in processing tracker.
- MS → PS (**TCP**): MS make transaction to PS essentially in processing tracker (for example when ask the properties of an object) and in modeling (edit a shell, ask to DS information).
- MS → PS (**UDP**): MS send UDP to PS in several cases (when we update of global resource from GUI, create an instance see Instance creation steps, need a synchronization, etc ...).
- PS → MS (**TCP**): PS make transaction to MS in several cases (for example when ask the definition of an archive or of configuration objects, get the value of a global resource, etc ...).
- PS → MS (**UDP**): PS send UDP to MS essentially to remote status of instance/objects in processing tracker).
- PS → DS (**TCP**): PS make transaction to DS when we modeling generic jobs (request come from MS).
- PS → DS (**UDP**): PS send UDP to MS essentially when we submit a job.
- DS → PS (**UDP**): DS send UDP to PS essentially to remote job status