

[DOC] Cytomine Requirements


Cytomine server is a complete environment with several components (databases, image servers, web server, machine learning algorithms). It is therefore recommended to install it on a dedicated computer to run smoothly. However, it is possible to install and test it on a regular desktop or laptop computer e.g. for small to medium-scale studies or for developmental testing. It requires a Linux-based operating system (we recommend Ubuntu 14.04).

Because the installation procedure downloads gigabytes of data (sources, binaries, toy data), it is recommended to use a fast internet connection.

Once Cytomine server is installed, one can access it through a modern web browser or through the Restful API or Python or Java clients.

Server

Configuration for 1 server

	Minimum Some users at the same time and some data	Recommended More users at the same time and more data	
CPU	8 core 64 bits	16 core 64 bits	Cytomine is a set of multithread servers/tools. If you want to support more users, you need to have more cores.
MEMO RY	8	16	If you want to store a lot of data or if you have a lot of users, you will need a larger amount of memory.
Disk	HDD 100GO	HDD with more than 2TO	On average, 1 image = 1GO and data for 1 image = 50MB (annotations , activities,...). If you plan to store 1000 images => 1To + 50GO <div style="border: 1px solid red; padding: 5px; display: inline-block;">  This does not include backup space! </div> 20G for the Cytomine Docker installation
OS	Ubuntu / Debian/ CentOS	Ubuntu / Debian/ CentOS	Docker needs to be installed Port 80 needs to be opened (by default, it's open) You need to have root (sudo) access to the server.
DNS		1 domain	

More than 1 server

The full Cytomine env contains:

	CPU	Memory	Disk
Core server	★★★★★	★★★★	★
IMS server / IIP servers	★★★★★	★★★★★	★★★★★
PostgreSQL	★★	★★★★	★★★★★
MongoDB	★★	★★★★	★★★★★
Retrieval server	★★★★★	★★★★★	★

If you have multiple servers, you can split environment like that:

	Server 1	Server 2	Server 3	Server 4	Server 5	Server 6	Server 7
1 server	All						
2 servers	Core PostgreSQL MongoDB Retrieval Software_router	IMS IIP					
3 servers	Core PostgreSQL MongoDB	IMS IIP	Retrieval Software_router				

4 servers	Core	IMS IIP	Retrieval Software_router	PostgreSQL MongoDB			
5 servers	Core	IMS IIP	Retrieval	PostgreSQL MongoDB	Software_router		
6 servers	Core	IMS 1 IIP 1	IMS 2 IIP 2	Retrieval	PostgreSQL MongoDB	Software_router	
>= 7 servers	Core	IMS 1 IIP 1	IMS N IIP N	Retrieval	PostgreSQL	MongoDB	Software_router

Client

Supported browser:

- Chrome
- Firefox
- Safari
- IE >= 9 (but no upload)