

## Application of Highly Efficient Database Systems in Virtual Screening Protocol.

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Increasing power of modern multicore CPUs caused computational power to be relatively cheap nowadays and so processor time greed of Virtual Screening (VS) protocol is no longer an issue. However the amount of output produced and size of compound databases used for VS brought up new challenges, such as ways of sharing large amounts of data and flexible and rapid results analysis. In this poster we would like to introduce application of MySQL cluster database engine supporting results analysis and filtering.

Cluster database engine divides the data into smaller chunks and spreads them across the cluster nodes. This approach allows all the dataset to be held in RAM and so provides instant access to data and speeds up multitable queries by several magnitudes. In addition several applications were written for batch processing VS outputs and ease up visual inspection stage of virtual screening protocol.

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