NVIDIA Graphics Processors Power Breakthrough In HIV Research

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A team of researchers at the University of Illinois at Urbana-Champaign (UIUC), in collaboration with researchers at the University of Pittsburgh School of Medicine have taken a step forward in HIV research by running simulations on the Blue Waters Supercomputer, which is comprised of 32 Cray XK7 supercomputer cabinets and is powered by 3,000 NVIDIA Tesla K20X GPU accelerators.

The researchers used computer simulations to uncover the chemical structure of the HIV capsid, which according to the press release both protects a virus' genetic material and also acts as a sort of virus delivery system by sneaking into a human cell and unloading the infection.

Blue Waters Supercomputing Center at UIUC

The hope is that insight into how the capsid is constructed and behaves will help researchers deliver more effective antiretroviral drugs. It's even more exciting because targeting the capsid is a relatively new approach to fighting HIV infections around the world.

We've said it before and we'll say it again: This sort of news is why technology is so important. It seems that so much of our new tech are essentially just elaborate toys and entertainment devices, and it's easy to forget that the same companies who crank out components that let us game with better graphics at a higher framerate also contribute to the sort of research that saves lives and can change the world.