CASE STUDY

janet futures

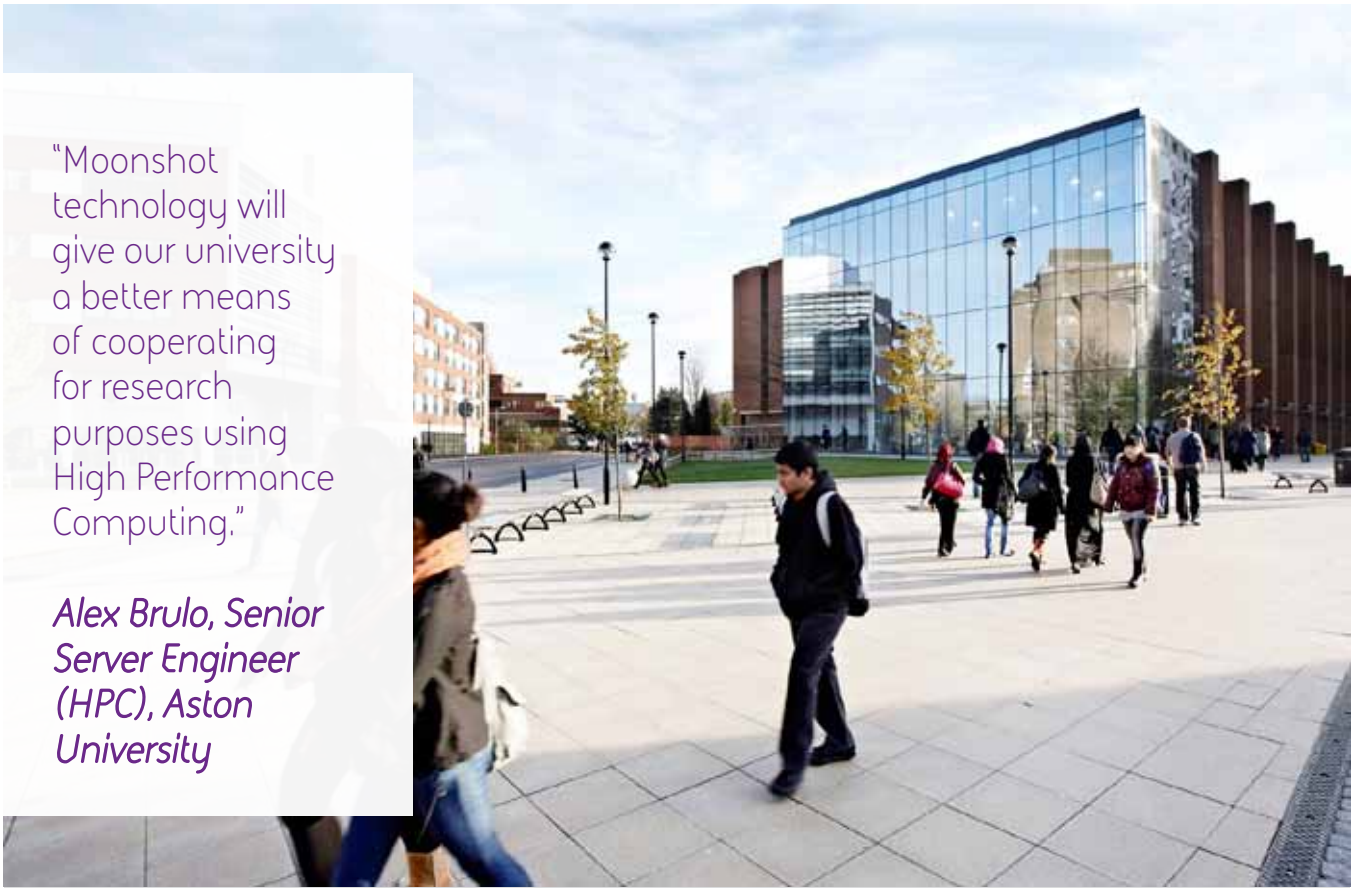
Aston University
Birmingham

Aston University

Aston University to use Moonshot technology to improve authentication for High Performance Computing.

Aston is a research-led university with an excellent reputation for ground breaking, innovative and applicable research.

The university provides computing capacity to researchers within the university through High Performance Computing (HPC). For researchers outside of the university creating appropriate access has proved to be more complicated: this has led the university to trial Moonshot technology to enable access through single sign-on authentication.



"Moonshot technology will give our university a better means of cooperating for research purposes using High Performance Computing."

Alex Brulo, Senior Server Engineer (HPC), Aston University

Image courtesy of Aston University

Authentication helps to streamline new partner opportunities

About Aston University

Aston University is based in the centre of Birmingham and is home to over 65,000 students, as well as being a world-ranking research facility in areas such as photonics and energy solutions. The university's School of Engineering and Applied Science specialises in applicable research that addresses future technological needs, and uses High Performance Computing to solve mathematically complex problems and analyse large datasets.

Different authentication models limit collaboration

Potential partners in research projects who wish to collaborate and share HPC resources with Aston University cannot at present since there is no common model for authentication.

"With Moonshot technology we can allow outside collaborators to access computer resources using existing credentials from their own organisation for authentication."

In one instance, no acceptable systems for collaboration were in place between Aston University and the Evergrow project partners www.evergrow.org. It took 6 months to organise a solution whereby one university could use the other partners' systems. This had to bypass Aston University's firewalls to access HPC systems, involving extra administration and potential risks.

Alex Brulo, the Senior Server Engineer who is in charge of configuration, management and cluster building, believes that it is important for the university to have a single authentication infrastructure in place, not only for security reasons but as a means to support collaborations and therefore attract new research partners by providing easy access to HPC systems.

Towards a single infrastructure

Aston University will begin building the functionality of Moonshot technology into its systems in early 2012, in order to define users, map their identity and simplify authentication.

Alex Brulo says: "With Moonshot technology we can allow outside collaborators to access computer resources using existing credentials from their own organisations for authentication. This gives us an infrastructure that can actually help streamline and improve collaborations.

"For example, if a partner needs to collaborate on projects outside of their normal working environment, Moonshot can free up considerable time, enabling researchers to dedicate more time to actual research rather than finding ways of making cross-institutional authentication practical."

Find out more about Moonshot

Moonshot is a Janet initiative in partnership with the GÉANT project and others, to develop a single unifying technology for extending the benefits of federated identity to services beyond the web, including cloud infrastructures, High Performance Computing, grid infrastructures and other services such as email.

A pilot to explore the use of Moonshot technology is underway. If you would like to take part in the pilot or get involved in other ways, please get in touch. You can contact Dr John Chapman, Strategic Programmes, on +44 (0) 1235 822346 for an informal chat, or you can contact Janet Service Desk on service@ja.net or 0300 300 2212.

To learn more, visit the Project Moonshot website: http://www.ja.net/moonshot