

Titel:

Providing a Cloud Network Infrastructure on a Supercomputer

Abstract:

Supercomputers and clouds both strive to make a large number of computing cores available for computation. More recently, similar objectives such as low-power, manageability at scale, and low cost of ownership are driving a more converged hardware and software. Challenges remain, however, of which one is that current cloud infrastructure does not yield the performance sought by many scientific applications. A source of the performance loss comes from virtualization and virtualization of the network in particular. This talk provides an introduction and analysis of a hybrid supercomputer software infrastructure, which allows direct hardware access to the communication hardware for the necessary components while providing the standard elastic cloud infrastructure for other components.