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UberCloud Publishes New Compendium of CAE Cloud Case Studies

UberCloud publishes the third annual Compendium of case studies describing technical computing in the cloud. Like its predecessors in 2013 and 2014, this year's edition draws from a select group of projects undertaken as part of the UberCloud Experiment. These case studies are about aerodynamics optimizations, coronary artery flow, aircraft wing fluid structure interaction, heat transfer on thermoplastic olefins, microelectronic packaging, wind turbine aerodynamics, frontal car crash, duct elbow optimization, acoustic modelling, and parametric radio frequency heating; to name a few.

The goal of the UberCloud Experiment remains the same – to perform engineering experiments in the cloud with real CAE applications in order to understand the roadblocks and how to overcome them. The Compendium is a way of sharing these results with our broader CAE community. And the efforts are paying off; based on the experience gained over the past several years, UberCloud has now increased the success rate of the individual end-user experiments to almost 100%, as compared to 40% in 2013 and 60% in 2014.

This year, UberCloud reached an important milestone when introducing its new UberCloud CAE Container technology based on Linux Docker containers. Use of

these containers by the teams dramatically improved and shortened their experiment times from an average of three months to a few weeks; or, in a number of instances, just a few days. Containerization simplifies the access, use, and control of HPC resources, whether on premise or remotely, in the cloud. Essentially you are working with a powerful remote desktop in the cloud that is as easy to use as your regular workstations. You do not need to learn anything about systems architecture and use to run your projects. This approach will inevitably lead to the increased use of CAE for daily design and development.

The latest round of UberCloud Experiments – again generously sponsored by Intel – is well underway and new teams are constantly signing up to participate in future rounds. This is a testimony to the success of the collaborative model we have created – a variation on crowd-sourcing that brings the benefits of technical computing as a service to an under-served SME population that, until now, had no way to access this transformative, enabling technology.

Click here to download the new UberCloud Compendium. .

Until next time,

Joe Walsh
CEO
intrinSIM

intrinSIM LLC | 1482 The Orchard Road | Clarkesville | Ga | 30523