



Delivering Unidata Technology via the Cloud

Ward Fisher and Jennifer Oxelson Ganter

UCAR/Unidata, Boulder, United States (wfisher@ucar.edu)

Over the last two years, Docker has emerged as the clear leader in open-source containerization. Containerization technology provides a means by which software can be pre-configured and packaged into a single unit, i.e. a container. This container can then be easily deployed either on local or remote systems. Containerization is particularly advantageous when moving software into the cloud, as it simplifies the process.

Unidata is adopting containerization as part of our commitment to migrate our technologies to the cloud. We are using a two-pronged approach in this endeavor. In addition to migrating our data-portal services to a cloud environment, we are also exploring new and novel ways to use cloud-specific technology to serve our community. This effort has resulted in several new cloud/Docker-specific projects at Unidata: “CloudStream,” “CloudIDV,” and “CloudControl.”

CloudStream is a docker-based technology stack for bringing legacy desktop software to new computing environments, without the need to invest significant engineering/development resources. CloudStream helps make it easier to run existing software in a cloud environment via a technology called “Application Streaming.” CloudIDV is a CloudStream-based implementation of the Unidata Integrated Data Viewer (IDV). CloudIDV serves as a practical example of application streaming, and demonstrates how traditional software can be easily accessed and controlled via a web browser. Finally, CloudControl is a web-based dashboard which provides administrative controls for running docker-based technologies in the cloud, as well as providing user management.

In this work we will give an overview of these three open-source technologies and the value they offer to our community.