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# Building and Managing Linux Containers for Centralized and Distributed Systems

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Linux containers, with the build-once-run-anywhere approach, are becoming popular among scientific communities for software packaging and sharing. Docker is the most popular and user friendly platform for running and managing Linux containers. Singularity is a platform for deploying light-weight containers for HPC systems. Kubernetes is a portable orchestration system for managing containerised workloads. This hands-on tutorial workshop will cover the following:

- Overview of the Linux containers technology
- Docker: Installation, building and managing Docker containers
- Singularity: Installation, building and running singularity containers, and creating singularity containers from Docker containers
- Containers for HPC: using Docker and Singularity containers in HPC job scripts using HTCondor
- Container Orchestration: Introduction to Swarm/Kubernetes and Hands-on

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