Provisioning on Container

Objective

Objective of this project is to implement HPC on containers.

Features of warewulf v4

- stateless nodes based on container
- rapid development
- only one command to control everything (wwctl)

Workflow

- first nodes get boots up
- DHCP gives ip address to the given node
- then ipxe file get transferred over the network
- then kernel is transferred over the network
- then runtime overlays are transferred to the node
- then nodes get booted up

Warewulf v4

Services	Warewulfd
Ports	9867
Dependencies	DHCPd,tftpd, nfs-server
Description	Warewulf is a provisioning tool which uses Containers

SLURM

Services	slurmctld,slurmdbd,slurmd
Ports	6817,6819,6818
Dependencies	Build Tools & Libraries,db,Python,Perl,Numactl,munge,LDAP or PAM,Optional Libraries/Components/Languages
Version	Slurm 20.11.8, which was released on August 3, 2021.
Description	SlURM, which stands for "Simple Linux Utility for Resource Management," is an open-source job scheduler and resource management system commonly used in high-performance computing (HPC) clusters and supercomputers.

Ganglia

Services	Gmetad,Gmond
Ports	8651,8649
Dependencies	PHP , httpd
Description	Ganglia is a popular open-source monitoring and performance measurement system.