

RYAN MILLER#, and ZHIJUN WANG, Department of Computer Science,
Mathematics and Engineering, Shepherd University, Shepherdstown, WV, 25443.
Simplifying virtual linux containers using docker.

Docker is a relatively new take on Linux container based virtualization. Docker is quickly being adopted and used worldwide for its ease of use. It makes use of Linux kernel namespaces and control-groups to isolate running container instances, which are self-contained and fully-functioning systems. This makes it possible for multiple container instances to run on the same host natively using the same host Linux kernel. This contrasts with the current trend of hypervisor based virtualization, which uses a virtual guest operating system running on top of the host operating system. Because each system has its own configuration, porting hefty applications can be troublesome. Using Docker, applications can be ported from a development environment to a production environment quickly and seamlessly. Docker packages this technology into an easy-to-manage system which can be maintained by both system administrators and developers alike. By utilizing Docker, businesses can increase their efficiency and productivity by saving time which is usually reserved for systems configuration.