

JESSE DRAPER AND WEIDONG LIAO, Department of Computer Science, Mathematics and Engineering, School of Natural Sciences and Mathematics, Shepherd University, Shepherdstown, WV 25443. Cloud Computing and Docker Containerization: A Survey

Business today has gradually moved the cloud and serverless computing has become a trend for IT services. With current cloud computing offerings, businesses in nearly any market segment perform at levels once only accessible to multimillion dollar companies. In addition to putting advanced infrastructure and applications within reach of all companies, cloud computing utilizes a payment structure where utility companies have adopted in the very beginning: you pay only for what you use. Cloud Computing is more cost effective and provides better flexibility and scalability. It is ideal for companies such as online stores who need to serve significantly more customers in Thanksgiving shopping season compared to regular season.

Traditionally, cloud computing service providers rely on virtualization, a technique to create virtual servers and computing resources on a single hardware set, to provide a variety of services for customers. The heavy virtualization has led to the newer architectural approach to create cloud application: Microservices. In Microservices architecture, cloud application is built as a set of services. Each service can be developed, tested and deployed independently. Containerization is one of the enabling techniques in Microservices architecture and Docker is one of the leading implementations of containerization. This poster presents a survey of Docker containerization.