Discover how Tech Data can help automatically migrate from monolithic legacy middleware run-times to microservices run-times on containers

The middleware challenge of moving to a microservices container based model

Software and application improvements often translate into business process improvements, an improved customer experience and a competitive advantage for the organisation. Unsurprisingly then, organisations are driving for dynamic and rapid software development by organising themselves into smaller development teams and embracing agile methodologies. In support of this new approach, IT projects hosted in shared multi-node clustered middleware environments have given way to an application centeric microservices approach with a focus on isolating applications into their own-runtime. However, one of the biggest challenges to adopting such an approach is the migration itself. Fortunately, Tech Data, leveraging their middleware automation and configuration management tool, Talos, is able to help organisations make the move from traditional monolithic middleware to microservices hosted in Docker containers.

The flexibility offered by a container based approach

The IT world has embraced virtualisation as a way to become more flexible and get more compute power out of the data centre. The technologies and approaches to virtualisation have evolved over the years, starting with multi-tasking within the operating system and then later the ability to run multiple operating systems on the same hardware via hypervisors, allowing for virtual operating systems. However, virtual operating systems are still bulky and not very portable from one IT environment to another. This causes massive problems in the world of DevOps as it becomes difficult to move configuration changes between environments. To answer this challenge containers have taken centre stage. Containers are application centric in nature and contain enough of the operating system run-time environment to allow the applications contained in them to run. Containers allows for a minimal sized run-time wrapped around the application thereby maximising portability. Docker is a leader in this new container based approach.

Migrating to Docker is made simpler with Talos

For organisations looking to transition from traditional middleware based environments (running on bare-metal and virtual systems) to container based environments, Docker provides an outstanding solution. However, migrating run-times to Docker containers presents an overwhelming task and becomes a barrier to adoption. Fortunately, Tech Data has a solution, Talos. Talos can automatically discover and import traditional middleware environments. With Talos, it is possible to break up the middleware configuration into independent application centric templates (for example WebSphere Application Server) that can then be converted automatically to leaner microservice run-time environment templates (for example WebSphere Liberty Profile or Tomcat), which are then leveraged to create Docker base images. Talos makes it far easier for an IT team to create a library of base Docker images combined with tokenised Talos application templates, allowing for the rapid creation of context specific (development verses quality assurance verses production) instances of a given application.
Adopting microservices and Docker for middleware hosting helps achieve:

- Dramatic reduction in migration times by up to 75%
- Reduced risk of human error by leveraging full automation
- Optimised infrastructure by creating golden master architecture and replicating consistently throughout the software development lifecycle
- Increased agility by allowing an organisation to quickly deploy new instances to address performance needs or to move into new geographic locations.

Middleware, Cloud and Orchestration interfaces supported

**Available Middleware Toolkits**
- IBM Liberty Server
- Apache Tomcat
- Red Hat JBoss/WildFly
- IBM HTTP Server
- IBM WebSphere Application Server
- IBM MQ
- F5 Big-IP
- IBM DataPower
- Oracle WebLogic
- Magento
- IBM WebSphere Portal
- IBM WebSphere Commerce
- IBM Mobile First
- IBM IIB
- IBM BPM

**Available orchestration engine integrations**
- Jenkins
- Red Hat Ansible
- IBM Urban Code Deploy
- HPE Operations Orchestration

**Available cloud provider integrations**
- Amazon Web Services
- Microsoft Azure
- IBM Cloud
- VMware
- IBM PureApplication Systems

Take your next step with complete confidence

Call Tech Data today to review how you can streamline your middleware infrastructure by moving to lighter weight microservice runtime environments hosted in Docker containers, Tech Data can review your environment and outline an approach scoping the activities in order to produce an accurate time and cost estimate for your migration.

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