revenera™

SOFTWARE LICENSING

Container Environments

There is much discussion today about software containers (Docker and others), a solution that simplifies running applications in a consistent way across multiple computing environments. Containers are also an efficient way to maximize computing resources, in many cases replacing virtual machines. The concept is appealing, but how does containerization affect licensed software applications?

As was the case with virtual machines, containers increase the potential for intentional or unintentional overuse of an application. Containers allow multiple instances of an application to be spun up using similar machine characteristics such as a MAC address. If an application is using this characteristic to secure licensing, there is a risk of overuse as a single license is duplicated across multiple containers. Software licensing technologies evolved to detect and control licensing in virtual environments, and now must do so for containers.

Revenera's Approach to Containers

A good first step is for applications to be able to detect when they're running in a container, functionality supported in Revenera's Licensing solution through its Docker Environment Detection feature. This allows the application to take a predetermined course of action ranging from doing nothing to shutting down.

The impact of running in a container depends on the licensing model being used. Concurrent models, where the specific identity of the client is not important, can be supported in containers, provided a unique identifier can be established for each container. Revenera Licensing provides a Container ID for this purpose, allowing a license server to accurately track application usage.
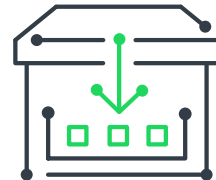
For example, consider an application that is licensed to a customer for 10 concurrent users. The customer containerizes the application, creating multiple containers, each running the application. As each container is created, FlexNet Embedded determines the Container ID for that container and the application requests a license from the licenser server. The license server, which maintains the count of concurrent users, recognizes the unique Container IDs and will not grant more than the 10 contracted licenses, regardless of how many containers the customer creates.

For usage-based licensing, the license server uses the Container ID to accurately track consumption by unique clients. Using this method, consumption can be tracked on an ongoing basis even if the container running the application is short-lived.

Looking Forward

There is an underlying divergence between licensing and containerization. Ideally, all elements of an application would be included in a container to realize the benefits of its easy deployment model. But items in containers can become untraceable,

reducing the ability of licensing technology to accurately track usage. Revenera's goal is to balance the flexibility and efficiency of containers with the core mission of licensing to protect the intellectual property and revenue streams of software providers.

NEXT STEPS

See how Software Licensing can help you.

LEARN MORE >

Revenera provides the enabling technology to take products to market fast, unlock the value of your IP and accelerate revenue growth—from the edge to the cloud. **www.revenera.com**