

Time Machine for Containers (TMCON)

Enable Time Shift Testing of your Containerized Applications

Speed Up and Cut Costs on Containerized Application Deployment with Virtual Clocks

Businesses are aware of the importance of deploying critical applications and transforming their IT environments to meet the ever-changing technology landscape and stay competitive. Upgrading or migrating business information, practices and processes to advanced technology in order to increase business agility, productivity and cost savings is the key for IT.

Time Machine software is a de facto standard that enables you to time travel with your applications into the future or the past with variable speed capability for any functional tests. With virtual clocks our software facilitates time shift testing on your date and time sensitive application logic, such as monthend/quarter-end/year-end processing, billing cycles, workflow, regulatory go live and policy life cycles with no delay.

Time Machine, the original date and time simulation software, has been serving organizations across all industries since 1997 and is now ready to time travel your containerized applications. Thousands of customers worldwide utilize Time Machine on a daily basis, including 47 of the Fortune 100 companies and many Global 1000 companies. Our major partners, including IBM and Red Hat, recommend Time Machine for critical testing runs in the OpenShift environment. Time Machine operator is also available on the Red Hat Marketplace.



Key Benefits

Time Machine pod is running under non-root user, which is in line with default security restrictions in Kubernetes/ OpenShift, and will adhere to any security constraints of an enterprise environment.

Licensing of newly created pods is done automatically by the Time Machine Floating License Server, which provides flexibility to support scaling in a dynamic environment.

Simultaneous time travelling of multiple pods across different namespaces is done using Time Machine Sync Server (see TM Sync Server Data Sheet), which is also capable of broadcasting virtual clocks outside the Kubernetes cluster.

Saves hardware and software costs. Boosts engineering team productivity. Mitigates risk for mission-critical application failures.

Ensures large scale software projects finish on time and under budget.



How Does It Work?

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- Time Machine pod/deployment enables time travelling of desired target Kubernetes/OpenShift pods/deployments.
- To time travel your containerized application, just create a Time Machine deployment in the same namespace.
- No need for changing the container images of the application you're using, or adding containers to the pod with your application.
- Simply configure your application deployments in three easy steps and create a virtual clock; in less than five minutes you will be time traveling your application with ease.
- Time travelling is done on the namespace level where all the (configured) target pods/deployments see the same virtual time.
- Virtual time can be in the future or in the past. You can also adjust the clock speed: normal, frozen, accelerated or decelerated.
- Persistent virtual clocks facilitate virtual time persisting across Time Machine pod restarts.

Boost Testers Productivity with Time Machine

With Time Machine, testers can time travel to any time they want without needing to wait for system, database and application administrators! This is particularly critical for secured environment such as Active Directory (AD), Kerberos or LDAP, as changing the system clock is not even allowed.

As an added benefit, a virtual clock ticking forward is immediately observed by the application and database - costly application and database shut down or restart is no longer needed. That means additional hours and days of savings for each time change testing (imagine hundreds of functional test cases with months/years saving).

Time Machine helps to streamline the testing requirements by allowing multiple virtual clocks in a shared test environment. Different testers can test different virtual clocks concurrently in the same environment. This capability dramatically boosts testers' productivity.

Time Machine Optimizes Your Software and Hardware Budget

Enterprise test or production environments are extremely costly. Just like a virtual machine enables one physical system to become multiple virtual systems, Time Machine's virtual clock easily turns one test environment into multiple test environments by running on different virtual times (up to 20,000).

As a result, Time Machine eliminates the need to replicate the identical testing environment solely for concurrent testing. This not only cuts down on hardware cost and maintenance, but also reduces software license cost and maintenance! With the advent of multi-tier architecture (presentation servers, database servers, and be application servers) the savings can easily hundreds of thousands or millions of dollars.

Synchronize Time Travelling of your Containerized Apps with Targets Outside of a Kubernetes/OpenShift Cluster

Using TM for Containers and TM Sync Server (see TM Sync Server Data Sheet), you can synchronize time travelling of your pods inside the cluster with other targets, such as pods in a different cluster, standalone Docker containers, or any other traditional systems that have Time Machine installed, be it on a physical or virtual server, on premise or in the cloud. This is especially critical for container Transformation projects. As functionalities incrementally migrate to the container world, it is very common to have the need to time travel both the container side and legacy application side.

Container Platforms

Docker Kubernetes Red Hat OpenShift Azure Kubernetes Service (AKS) Google Kubernetes Engine (GKE) Amazon Elastic Kubernetes Service (Amazon EKS) and more.

Requirements

TM Floating License Server TM Enterprise Management Console (optional TM Sync Server (optional)

Certification

Red Hat container and operator certification

Available on Docker Hub, Operator Hub and Red Hat Marketplace

Request a Demo

Download a free Time Machine demo at www.solution-soft.com. For more information, call us at +1 (408) 346-1415 or email sales@solutionsoft.com



Headquarters

2350 Mission College Blvd. Suite 777 Santa Clara, Ca 95054, U.S.A.

Europe Trnska 8, Suite 7 Belgrade, Serbia 11000

Technical Support

+1.408.346.1414 support@solution-soft.com

Sales

1.408.346.1415 (USA) +44.20.7193.3633 (EMEA) +61.2.6100.3030 (Asia Pacific) sales@solution-soft.com



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