Time Machine and Virtual Clock Speed

Time Machine provides software virtual clocks that enable you to time travel your applications into the future or the past, facilitating time shift testing on your date and time sensitive application logic, such as month-end/quarter-end/year-end processing, billing cycle, work flow, regulatory go live, & policy life cycle. Time Machine is transparent to applications and databases so no code modification is required to time travel and the system clock is never modified.   Time Machine is the original date and time simulation software for Unix and Windows since 1997 and it is Cloud ready. Thousands of customers worldwide utilize Time Machine successfully across all industries on a daily basis; including 47 of the Fortune 100 companies.

Virtual Clock Speed

Virtual Speed is a modifier to the three types of virtual clocks (Time Zone Clocks, Absolute Clocks and Relative Clocks) which allows for processes to run at a defined speed. Virtual Speed can be set to zero, which is referred to as a frozen clock or any speed up to 1000 times faster or slower than real time. As Virtual Speed is a clock modifier starting from 'Now', it can be applied to any of the three types of Virtual Clocks to accelerate or decelerate the clocks n times [0..1000] based on the positive or negative value specified.

Virtual Clock Speed Syntax

-s +/- [0..1000]

tmuser –a –u 209 –h 10 –s 2

This example adds a Relative Virtual Clock for uid 209 that is 10 hours in the future and has a Virtual Speed 2 times faster than real time.

tmuser –a –g testgroup –z Paris –s -10

This example adds Time Zone Virtual Clock for the group testgroup that is set to Paris (CET) and has a Virtual Speed 10 times slower than real time.

Virtual Clock Speed and Permanent Virtual Clocks

Time Machine loads the permanent Virtual Clocks from the configuration file *tmuser.cf* at system start up before any login is accepted by the system. The following are examples of entries in the tmuser.cf file that make use of Virtual Clock Speed.

"Big Freeze"   x=123123012017 f

This example establishes an Absolute Virtual Clock for the group Big Freeze that is set to 31-December-2017 at 23:01 and is frozen in time.

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This example establishes a Relative Virtual Clock for the QA-CRM application that is running four times slower than real time. In this example, the Relative Virtual Clock is not offsetting the minute of the clock.

Example Use Cases

Reliability Certification

System must run for 5 days to certify. If the testing cycle runs longer than expected, a Virtual Clock can be accelerated by a Virtual Clock Speed to ensure that the up-time requirement is met within the testing window.

Manual Testing

Must ensure that manual test cases be completed in same system calendar day. This can be ensured by establishing a decelerated Virtual Clock to guard against human inefficiencies.

Training

A blackout in a Network Control Center takes two days to fully investigate and debug. When training staff to handle this event properly, Virtual Clock Speed can be used to accelerate the Virtual Clock so that the training sessions can be completed in a much more manageable time frame.

Data Load Test

Testing depends on a data load. If the data load takes more time than expected, the test cases are in danger of not completing on time. A Virtual Clock with decelerated speed helps ensure that the data load completes within the allotted window and allows testing to commence.

About Solution-Soft

Solution-Soft is the leader in date and time testing software solutions, as well as data compression/file transfer and data storage management. We proudly provide our 2000+ domestic and international customers with patent-pending software solutions proven to optimize customer IT infrastructure, save costs, and deliver mission critical applications. Our goal is to deliver solutions that both fulfill our customers needs and catalyze future growth. Solution-Soft's customers are across all market sectors including 3M, Barclaycards, BBC, Boeing, CalPERS, Centrica UK, Covered California, Discover, Fed Ex, French Telecom, National Australia Bank, State Farm and Wells Fargo. Solution-Soft's market presence is bolstered by partnerships with Accenture, Citrix, FICO, Hewlett-Packard, IBM, Microsoft, Oracle, Red Hat and SAP. Solution-Soft works closely with top tier consultant partners around the world across all industries to achieve clients' business objectives with ultimate ROI.

Founded in 1993, Solution-Soft is privately held and based in Santa Clara, Ca., for more information visit www.solution-soft.com or call +1.408.346.1400.

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