We present an approach for software rejuvenation based on automated self-healing techniques that can be easily applied to off-the-shelf Application Servers and Internet sites. This self-healing scheme is meant to be the less disruptive as possible for the running service and to get a zero downtime for most of the cases. In our scheme, we exploit the usage of virtualization to optimize the self-recovery actions.

Watch the demo and you will see:
- A technique can be added to any application server or Internet sites without re-engineer the existing applications.
- A mechanism which provides a very fast recovery to cut down the mean time to recovery to the minimum.
- A technique which doesn’t loss any in-flight request or session data at the time of rejuvenation.
- A technique that detects anomaly or degradation service behavior and reacts to solve it.

More details:
Our solution requires the creation of three virtual machines: one virtual machine with our own load balancer module; a second virtual machine where the main application server or internet site runs; and a third virtual machine where we have a replica of the application server which works as a hot-standby application server. First Virtual Machine (VM) machine runs a set of components: our Load Balancer (LB); a module that collects system data from the application; a module that detects potential anomalies; a software watchdog; and a last module that is the coordinator of the self-recovery actions. In the other two virtual machines, we installed the web application. In every VM we install a SRA Agent. This agent has the responsibility for the recovery action.

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