Disable Kernel Same page Merging (KSM):

KSM is a kernel feature that allows an hypervisor to share memory pages between VMs

is used for the purpose of keeping single copy of data shared across multiple VMs.

Consider a copy-on-write system, which copies any blocks before they are overwritten with new information (i.e. it copies on writes). In other words, if a block in a protected entity is to be modified, the system will copy that block to a separate snapshot area before it is overwritten with the new information. This approach requires three I/O operations for each write: one read and two writes. Prior to overwriting a block, its previous value must be read and then written to a different location, followed by the write of the new information. If a process attempts to read the snapshot at some point in the future, it accesses it through the snapshot system that knows which blocks changed since the snapshot was taken. If a block has not been modified, the snapshot system will read that block from the original protected entity. If it has been modified, the snapshot system knows where the previous version of that block is stored and will read it from there. This decision process for each block also comes with some computational overhead.

