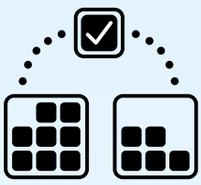
Maximize workload mobility—data center to cloud—by using consistent processor architecture

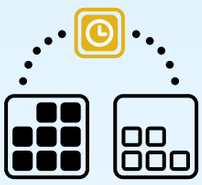
You can migrate live VMs between Intel processor-based servers but migration in a mixed CPU environment requires downtime and administrative hassle

If your enterprise uses hybrid or multi-cloud environments, workload portability is key to maximizing business agility and being able to migrate virtual machines seamlessly between servers without downtime is highly advantageous. We tested three VM migration scenarios using VMware vSphere® 6.7 to create a VM running Microsoft Windows Server 2016 Datacenter on each server, installed Microsoft SQL Server 2016 onto the VM, and tested availability with a database workload.



No downtime during live migration

between legacy and current servers powered by Intel® Xeon® processors



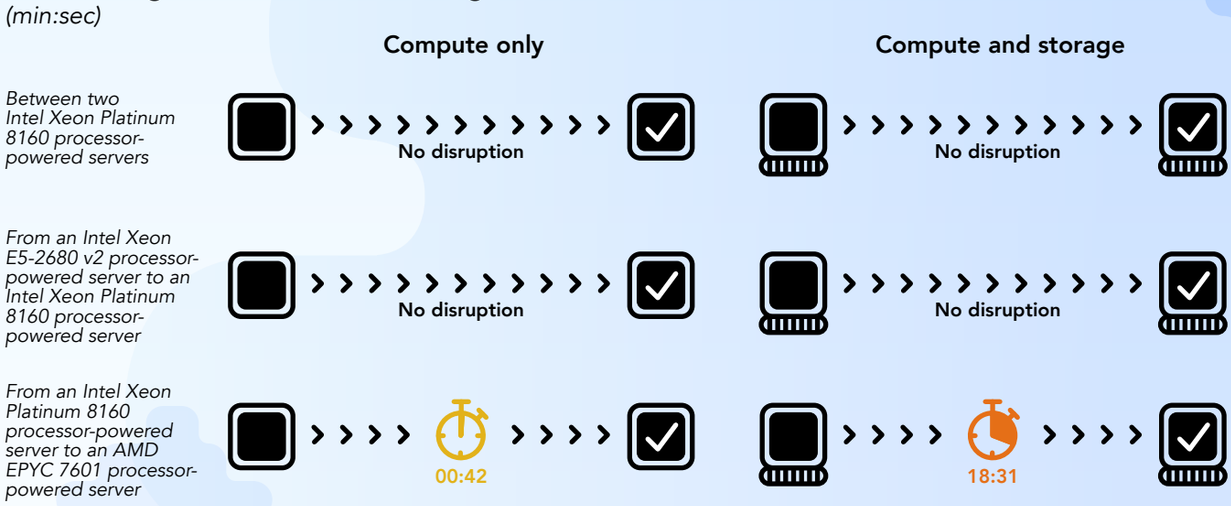
42 seconds of downtime for a cold migration
(with shared storage)

from an Intel processor-powered server to an AMD EPYC™ processor-powered server

18 minutes of downtime for a cold migration
(without shared storage)

from an Intel processor-powered server to an AMD EPYC processor-powered server

Time to migrate a 60GB VM running Microsoft SQL Server 2016
(min:sec)



Because live migration is possible on all Intel processors from 2006 on,[1] we could migrate live VMs between Intel Xeon processor-based servers with zero downtime. To move VMs between servers powered by different processor architectures required first shutting down the VM for a cold migration, which took the workload offline for as long as 18 minutes. Downtime can be expensive for businesses to plan around, so be sure to factor this added expense into your calculations when selecting new servers.

Learn more at http://facts.pt/8zysd88

1 EVC and CPU Compatibility FAQ, accessed January 10, 2019, https://kb.vmware.com/s/article/1005764.

Principled Technologies®