



Virtual Machine Migration Guide

VIRTUAL MACHINE MIGRATION

The process of moving a virtual machine from one physical hardware environment to another. This can be done via live migration or cold migration.

LIVE MIGRATION

- The virtual machine is migrated without disconnecting the client or requiring a reboot
- Does not require any downtime

COLD MIGRATION

- The virtual machine requires shutdown before it can be migrated
- Requires downtime

For those operating in mixed environments, **virtual machines can easily be migrated between AMD EPYC™ processors and Intel Xeon processors** without any specialized tools or software, however; certain conditions must be met. The table below provides a summary of migration capabilities for VMware, Microsoft® Hyper-V and Linux® KVM environments.

| | LIVE MIGRATION | COLD MIGRATION |
|--|--|----------------|
| INTEL (ANY) TO AMD EPYC | ✗ | ✓ |
| AMD EPYC TO INTEL (ANY) | ✗ | ✓ |
| INTEL 2600 v4 (BROADWELL) TO INTEL SP (SKYLAKE/SCALABLE) | ✗ (Yes only if SP is defeatured to 2600 v4 level) | ✓ |
| AMD EPYC TO AMD EPYC | ✓ | ✓ |
| INTEL SP (SKYLAKE/SCALABLE) TO INTEL SP | ✓ | ✓ |

VMWARE

- <https://www.vmware.com/products/vsphere.html#compare>
- <https://www.vmware.com/products/vsan.html>

MICROSOFT

- <https://docs.microsoft.com/en-us/windows-server/virtualization/hyper-v/manage/live-migration-overview>

KVM

- <http://www.linux-kvm.org/page/Migration>
- https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/5/html/virtualization/chap-virtualization-kvm_live_migration

