FAQ: XenMotion, Live Migration

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Article | Topic : Migration

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Question and Answers

Q: What is XenMotion?

A: XenMotion is a feature that allows live migration of virtual machines. With XenMotion, you can move a running virtual machine from one physical host system to another without any disruption or downtime.

Q: Which editions of XenServer support XenMotion?

A: All editions of XenServer support XenMotion.

Q: What are the system requirements to enable XenMotion?

A: You need at least two physical host systems in a Resource Pool. The host systems need to have similar processor configurations, remote shared storage, and Gigabit Ethernet connectivity between them.

Q: How similar do the processors need to be in my host systems to support XenMotion?

A: To join hosts in a pool, and therefore use XenMotion, the host processors must be of the same vendor, family, and model, and must expose identical feature flags. In XenServer 5.5, the Enhanced Speed sTep (EST) feature flag is ignored when comparing feature flags to maintain compatibility with previous XenServer versions.

Q: How do I determine the processor characteristics of a given XenServer host?

A: The processor characteristics can be identified using the host-cpu object of the XenServer **xe** command line interface (CLI):

```
[root@host ~]# xe host-cpu-list host-uuid=<HOST_UUID> params=uuid,number,vendor,modelname,stepping,flags
uuid ( RO)         : b37ef83f-3b0b-2b0a-3e95-9d9ffe003e67
       number ( RO): 0
       vendor ( RO): GenuineIntel
    modelname ( RO): Intel(R) Core(TM)2 Quad CPU           @ 2.66GHz
     stepping ( RO): 7
        flags ( RO): fpu de tsc msr pae mce cx8 apic sep mtrr mca cmov pat clflush acpi mmx fxsr sse sse2 ss ht nx
constant_tsc pni vmx est ssse3


uuid ( RO)         : ac66cf77-58f1-b79b-c75f-d647ac23d725
       number ( RO): 2
       vendor ( RO): GenuineIntel
    modelname ( RO): Intel(R) Core(TM)2 Quad CPU           @ 2.66GHz
     stepping ( RO): 7
        flags ( RO): fpu de tsc msr pae mce cx8 apic sep mtrr mca cmov pat clflush acpi mmx fxsr sse sse2 ss ht nx
constant_tsc pni vmx est ssse3


uuid ( RO)         : 973a1e63-f3fb-14b9-aa11-ed26ece2e97f
       number ( RO): 3
       vendor ( RO): GenuineIntel
    modelname ( RO): Intel(R) Core(TM)2 Quad CPU           @ 2.66GHz
     stepping ( RO): 7
        flags ( RO): fpu de tsc msr pae mce cx8 apic sep mtrr mca cmov pat clflush acpi mmx fxsr sse sse2 ss ht nx
constant_tsc pni vmx est ssse3


uuid ( RO)         : 443a52bf-af4c-b35e-91a3-1ef9e289669f
       number ( RO): 1
       vendor ( RO): GenuineIntel
    modelname ( RO): Intel(R) Core(TM)2 Quad CPU           @ 2.66GHz
     stepping ( RO): 7
        flags ( RO): fpu de tsc msr pae mce cx8 apic sep mtrr mca cmov pat clflush acpi mmx fxsr sse sse2 ss ht nx
```

```
constant_tsc pni vmx est ssse3
```

Q: Does XenMotion support live relocation of virtual machines between Intel- and AMD-based host systems?

A: No, XenMotion supports live relocation of virtual machines between systems with the same type and manufacturer of processor.

Q: Does XenMotion require you to have the same exact configurations for each host system?

A: While you do need to have the same type of processor in each host system, other configuration settings can differ. For example, each host system can have different amounts of memory, different types of storage controllers, or different network controllers. For the exact requirements, please check “Requirements for creating resource pools” in the XenServer Administrator’s Guide.

Q: What type of storage does a host system need to enable XenMotion?

A: The virtual machine running on the host system needs to be stored on remote shared storage to allow for live relocation with XenMotion. This may include NFS-based file shares, an iSCSI SAN (accessed via the software-based iSCSI initiator), or a Fibre Channel SAN. Storage Repositories through StorageLink are also supported.

Q: What type of network connectivity is required for XenMotion?

A: Citrix recommends that you use at least Gigabit Ethernet connectivity between your physical servers.

Q: How much disruption will occur during a live relocation of a virtual machine using XenMotion?

A: The actual disruption during a live relocation is generally 100 to 150 milliseconds. This disruption is so slight that services running in the virtual machine are not interrupted. Note that most of the disruption is caused by the network switch shifting traffic to a new port.

Q: Does XenServer support load management of virtual machines between multiple physical host systems?

A: Yes. Essentials for XenServer, Enterprise and Platinum Editions include Workload Balancing which creates recommendations for distributing VM load across multiple XenServer host systems.

Applicable Products

- XenServer