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Setting Advanced Host Attributes

([See Update](#)) This section guides you through setting advanced attributes for a host, and then lists a few attributes you might want to set under certain circumstances.

To set advanced attributes for a host

- 1 In the VI Client's inventory panel, select the virtual machine you want to customize.
- 2 Choose **Edit Settings** in the Commands panel and select the **Options** tab.
- 3 Select **Advanced**, and click the **Configuration Parameters** button.
- 4 Click **Advanced Settings**.
- 5 In the Advanced Settings dialog box that appears, select the appropriate item (for example, **CPU** or **Memory**), and then scroll in the right panel to find and change the attribute.

Cpu.VMAdmitCheckPerVcpuMin	1
Perform additional admission control check that per VCPU Virtual Machine minimum does not e...	
Min:	0
Max:	1
Cpu.VMotionMinAllocPct	30
Per Virtual Machine minimum CPU allocations (in %) for VMotion requirements	
Min:	0
Max:	200
Cpu.IntraCoreMigrate	0
When to allow intra-core migrations (0:when inter-core migration allowed, 1:always)	
Min:	0
Max:	1
Cpu.IdlePackageRebalancePeriod	541
Usecs between chances to rebalance idle packages (0 to disable)	
Min:	0
Max:	100000

The following tables list the advanced resource management attributes discussed in this document.



Caution Setting these attributes is recommended only for advanced users with considerable experience using ESX Server hosts. In most cases, the default settings produce the optimum result.

Table 9-4. Advanced CPU Attributes

Attribute	Description
CPU.MachineClearThreshold	If you are using a host enabled for hyperthreading and set this attribute to 0 , quarantining is disabled. See Quarantining .

Table 9-5. Advanced Memory Attributes

Attribute	Description	Default
Mem.CtlMaxPercent	Limits the maximum amount of memory that can be reclaimed from any virtual machine using <code>vmmemctl</code> , based on a percentage of its configured memory size. Specifying 0 disables reclamation via <code>vmmemctl</code> for all virtual machines. See Memory Balloon (vmmemctl) Driver .	65
Mem.ShareScanTotal	Specifies the total system-wide rate at which memory should be scanned for transparent page sharing opportunities. The rate is specified as the number of pages to scan per second. Defaults to 200 pages/sec.	200
Mem.ShareScanVM	Controls the rate at which the system scans memory to identify opportunities for sharing memory. Units are pages per second.	50
Mem.IdleTax	Specifies the idle memory tax rate, as a percentage. This tax effectively charges virtual machines more for idle memory than for memory they are actively using. A tax rate of 0 percent defines an allocation policy that ignores working sets and allocates memory strictly based on shares. A high tax rate results in an allocation policy that allows idle memory to be reallocated away from virtual machines that are unproductively hoarding it. See Memory Allocation and Idle Memory Tax .	75
Mem.SamplePeriod	Specifies the periodic time interval, measured in seconds of the virtual machine's execution time, over which memory activity is monitored to estimate working set sizes. See How ESX Server Hosts Allocate Memory .	60
Mem.BalancePeriod	Specifies the periodic time interval, in seconds, for automatic memory reallocations. Reallocations are also triggered by significant changes in the amount of free memory.	15

Table 9-6. Advanced NUMA Attributes

Attribute	Description	Default
Numa.RebalanceEnable	Set this option to 0 to disable all NUMA rebalancing and initial placement of virtual machines, effectively disabling the NUMA scheduling system.	1
Numa.PageMigEnable	If this option is set to 0 , the system does not automatically migrate pages between nodes to improve memory locality. Page migration rates set manually are still in effect.	1
Numa.AutoMemAffinity	If this option is set to 0 , the system does not automatically set memory affinity for virtual machines with CPU affinity set. See VMware NUMA Optimization Algorithms .	1
Numa.MigImbalanceThreshold	The NUMA rebalancer computes the CPU imbalance between nodes, taking into account the difference between each virtual machine's CPU time entitlement and its actual consumption. This option controls the minimum load imbalance between nodes needed to trigger a virtual machine migration, in percent.	10
Numa.RebalancePeriod	Controls the frequency of rebalance periods, specified in milliseconds. More frequent rebalancing can increase CPU overheads, particularly on machines with a large number of running virtual machines. However, more frequent rebalancing can also improve fairness.	2000
Numa.RebalanceCoresTotal	Specifies the minimum number of total processor cores on the host required to enable the NUMA rebalancer.	4
Numa.RebalanceCoresNode	Specifies the minimum number of processor cores per node required to enable the NUMA rebalancer. This option and Numa.RebalanceCoresTotal are useful when you want to disable NUMA rebalancing on small NUMA configurations (for example, two-way Opteron hosts), where the small number of total or per-node processors can compromise scheduling fairness when NUMA rebalancing is enabled.	2

See [Using NUMA Systems with ESX Server](#) for additional information.

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