1 4.0 SIP Proxy Server Virtualization

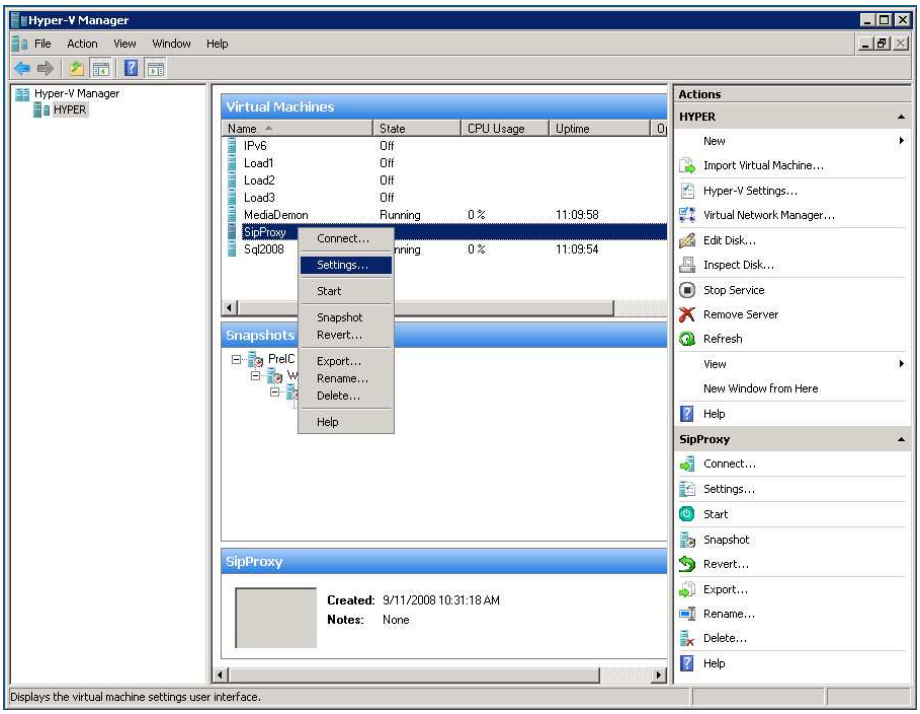
1.1 Windows 2008 Hyper-V

1.2 Introduction

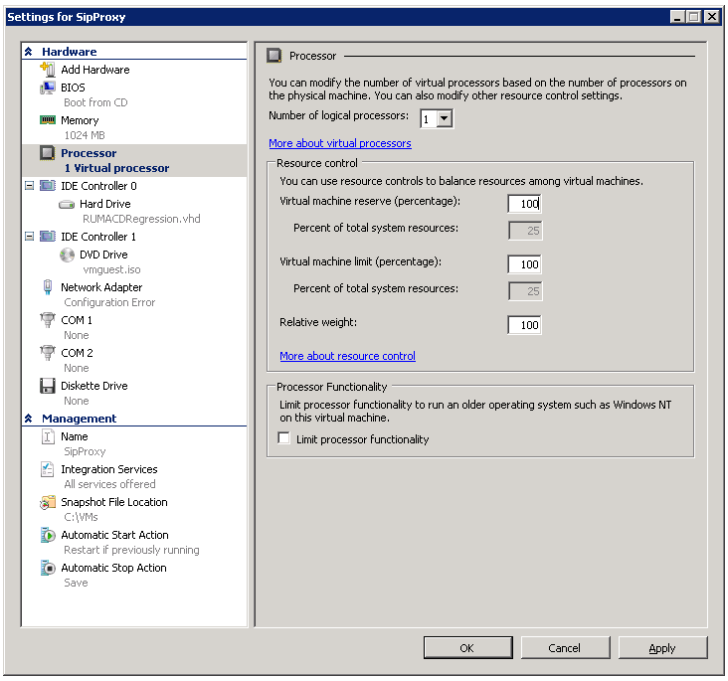
The Interaction SIP Proxy is used to route calls in real time. If the SIP Proxy cannot get the CPU time that it needs when it needs it, calls will be lost. For this reason we require a reservation to be set. Even with a reservation, it is possible for it to take more than 1 second for the Proxy guest machine to answer if the Hyper-V host machine is under high load (99%).

1.3 Setup and Configuration

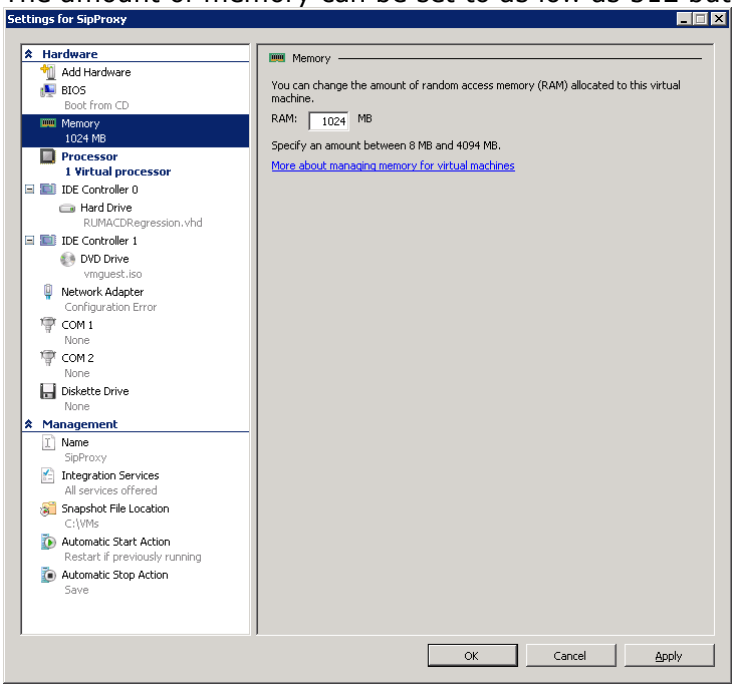
Use the Hyper-V Manager to set the reservation for the Proxy Server. Right click on the Server and select > Settings.



In the Hardware Section, select Processor. Only 1 Virtual Processor should be required for up to 50 calls per second (cps). This is a pretty substantial call rate. For the 50+ to 100 cps range, 2 CPUs should be set and for the 100+ cps range 4 CPUs should be set. In the processor control section, set the Virtual Machine Reserve (percentage) to 100.



The amount of memory can be set to as low as 512 but 1024 would be preferable.



1.4 Test Results

We used the Interaction SIP Bulkcaller for our testing. This is a custom built tool that gives us detailed granularity on the performance or a SIP application under test. We were able to send 50 cps to the Hyper-V Guest and ascertain the responsiveness based on the Virtual Server Hosts condition.

Testing Results with 4.0 SIP Proxy SU1 on Windows 2008 64 bit Hyper-V
A SIP Bulkcaller generated 50 cps at the Proxy and the Proxy routed calls to a Receiver. We measured the time to complete the work to determine how virtualization affected the performance. Record Route and Call Detail were enabled.

Cps	Reservation?	CPU Contention?	Time	Calls Rec/Sent
50	No	No	3:20	9850/9850
50	No	No	3:20	9850/9850
50	No	No	3:20	9850/9850
50	No	No	3:20	9900/9900
-	-	-	-	-
50	No	Yes	3:20	9887/9900
50	No	Yes	3:20	9900/9900
50	No	Yes	3:20	9900/9900
50	No	Yes	3:20	9900/9900
-	-	-	-	-
50	Yes	Yes	3:20	9900/9900
50	Yes	Yes	3:20	9900/9900
50	Yes	Yes	3:20	9900/9900
50	Yes	Yes	3:20	9900/9900

1.5 Additional Information

The results above are a concise summary of many test runs and other analysis of performance.