vSphere 6 ESXTOP quick Overview for Troubleshooting

### CPU c – Fields: D F

**%USED**: CPU Core cycles used by a VM. High values are an indicator for VMs causing performance problems on ESXi Hosts.

**%SYST**: Percentage of time spent by system to process interrupts and to perform other system activities on behalf of the world. Possible cause: maybe caused by high I/O VM.

**%CPU**: Percentage of time a VM was waiting to be scheduled. If you note values between five and ten percent take care. Possible reasons: too many vCPUs, too many vSMP VMs or a CPU limit setting (check %MLMTD).

**%CPU**: This value is interesting if you are using vSMP virtual machines. It shows the percentage of time a ready to run vCPU was not scheduled because of a CPU limit setting. Remove limit for better performance.

**%VMWAIT**: percentage of time a VM was waiting for some VMkernel activity to complete (such as I/O) before it can continue. Includes %SWPWT and “blocked”, but not %WAIT (as %WAIT does). Possible cause: Storage performance issue | latency to a device in the VM configuration eg. USB device, serial pass-through device or parallel pass-through device.

**%VMNICE**: Percentage of the time spent by the process doing nice work (eg. background process).

**%IDLE**: Percentage of time a VM was waiting to be scheduled. If you note values between five and ten percent take care. Possible reasons: too many vCPUs, too many vSMP VMs or a CPU limit setting (check %MLMTD).

**%DICTION**: This value is interesting if you are using vSMP virtual machines. It shows the percentage of time a ready to run vCPU was not scheduled because of a CPU limit setting. Remove limit for better performance.

**%SWPWT**: Counter showing how long a VM has to wait for swapped pages read from disk. A reason for this could be memory overcommitment. Pay attention if %SWPWT is >5

### Disk d – Fields: A B G J

**DAVG**: Latency at the device driver level. This value is interesting if you are using vSMP virtual machines. It shows the percentage of time a ready to run vCPU was not scheduled because of a CPU limit setting. Remove limit for better performance.

**SDLA**: Standard deviation of latency in millisecs for read, write and recovery write.

**RECOWR/s**: Number of recovery write operations completed per second.

**AVGLAT**: Average latency in millisecs for read, write and recovery write.

**AVGLAT**: Average latency in millisecs for read, write and recovery write.

**SWR/s, SWW/s**: SWR (swaps read), SWW (swaps write) Rate at which the ESXi Host is writing to or reading from swapped memory. A reason for this could be memory overcommitment. Pay attention if %SWPWT is >5

**ZIP/s**: Values larger 0 indicate that the host is actively compressing memory. Possible cause: maybe caused by high I/O VM.

**UNZIP/s**: Values larger 0 indicate that the host is accessing compressed memory. Possible reason: memory overcommitment.

**NUMA m (change to memory view) – Fields: D G**

**CACHEUSD**: Memory (in MB) compressed by ESXi Host

**UNZONE**: 0% if memory is compressed, >0% if memory is unzipped

**ZIP/s**: Values larger 0 indicate that the host is actively compressing memory. Possible cause: maybe caused by high I/O VM.

**UNZIP/s**: Values larger 0 indicate that the host is accessing compressed memory. Possible reason: memory overcommitment.

### NUMA m – Fields: D G

**NLMEM**: VM Memory (in MB) located at remote Node

**N%L**: Percentage of VM Memory located at the local NUMA Node. If this value is less than 80 percent the VM will experience performance issues.

**NRMEM**: VM Memory (in MB) located at remote Node

### Network n – Fields: A B C D E F K L

**rate**: Rate at which the ESXi Host is writing to or reading from swapped memory.

### ESXTOP Command overview

For changing to the different views type:

<table>
<thead>
<tr>
<th>m</th>
<th>Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>CPU</td>
</tr>
<tr>
<td>d</td>
<td>Disk Adapter</td>
</tr>
<tr>
<td>n</td>
<td>Network</td>
</tr>
<tr>
<td>v</td>
<td>Disk VM</td>
</tr>
<tr>
<td>p</td>
<td>Power states</td>
</tr>
<tr>
<td>x</td>
<td>vSAN</td>
</tr>
<tr>
<td>f</td>
<td>for add/remove fields</td>
</tr>
<tr>
<td>o</td>
<td>change field order</td>
</tr>
<tr>
<td>k</td>
<td>kill a world</td>
</tr>
<tr>
<td>e</td>
<td>expand/rollup (where available)</td>
</tr>
<tr>
<td>g</td>
<td>VMware guest name</td>
</tr>
<tr>
<td>u</td>
<td>Disk Device</td>
</tr>
<tr>
<td>d</td>
<td>Disk Adapter</td>
</tr>
<tr>
<td>i</td>
<td>Interrupts</td>
</tr>
<tr>
<td>v</td>
<td>Disk VM</td>
</tr>
</tbody>
</table>

### Memory m – Fields: B D J K Q

**AVGLAT**: Average latency in millisecs for read, write and recovery write.

**SDLA**: Standard deviation of latency in millisecs for read, write and recovery write.

**RECOWR/s**: Number of recovery write operations completed per second.

**AVGLAT**: Average latency in millisecs for read, write and recovery write.

**SWR/s, SWW/s**: SWR (swaps read), SWW (swaps write) Rate at which the ESXi Host is writing to or reading from swapped memory. A reason for this could be memory overcommitment. Pay attention if %SWPWT is >5

**ZIP/s**: Values larger 0 indicate that the host is actively compressing memory. Possible cause: maybe caused by high I/O VM.

**UNZIP/s**: Values larger 0 indicate that the host is accessing compressed memory. Possible reason: memory overcommitment.

**NUMA m (change to memory view) – Fields: D G**

**CACHEUSD**: Memory (in MB) compressed by ESXi Host

**UNZONE**: 0% if memory is compressed, >0% if memory is unzipped

**ZIP/s**: Values larger 0 indicate that the host is actively compressing memory. Possible cause: maybe caused by high I/O VM.

**UNZIP/s**: Values larger 0 indicate that the host is accessing compressed memory. Possible reason: memory overcommitment.

### Network n – Fields: A B C D E F K L

**rate**: Rate at which the ESXi Host is writing to or reading from swapped memory.

### CPU c – Fields: D F

**%USED**: CPU Core cycles used by a VM. High values are an indicator for VMs causing performance problems on ESXi Hosts.

**%SYST**: Percentage of time spent by system to process interrupts and to perform other system activities on behalf of the world. Possible cause: maybe caused by high I/O VM.

**%CPU**: Percentage of time a VM was waiting to be scheduled. If you note values between five and ten percent take care. Possible reasons: too many vCPUs, too many vSMP VMs or a CPU limit setting (check %MLMTD).

**%CPU**: This value is interesting if you are using vSMP virtual machines. It shows the percentage of time a ready to run vCPU was not scheduled because of a CPU limit setting. Remove limit for better performance.

**%VMWAIT**: percentage of time a VM was waiting for some VMkernel activity to complete (such as I/O) before it can continue. Includes %SWPWT and “blocked”, but not %WAIT (as %WAIT does). Possible cause: Storage performance issue | latency to a device in the VM configuration eg. USB device, serial pass-through device or parallel pass-through device.

**%VMNICE**: Percentage of the time spent by the process doing nice work (eg. background process).

**%IDLE**: Percentage of time a VM was waiting to be scheduled. If you note values between five and ten percent take care. Possible reasons: too many vCPUs, too many vSMP VMs or a CPU limit setting (check %MLMTD).

**%DICTION**: This value is interesting if you are using vSMP virtual machines. It shows the percentage of time a ready to run vCPU was not scheduled because of a CPU limit setting. Remove limit for better performance.

**%SWPWT**: Counter showing how long a VM has to wait for swapped pages read from disk. A reason for this could be memory overcommitment. Pay attention if %SWPWT is >5

### Disk d – Fields: A B G J

**DAVG**: Latency at the device driver level. This value is interesting if you are using vSMP virtual machines. It shows the percentage of time a ready to run vCPU was not scheduled because of a CPU limit setting. Remove limit for better performance.

**SDLA**: Standard deviation of latency in millisecs for read, write and recovery write.

**RECOWR/s**: Number of recovery write operations completed per second.

**AVGLAT**: Average latency in millisecs for read, write and recovery write.

**SWR/s, SWW/s**: SWR (swaps read), SWW (swaps write) Rate at which the ESXi Host is writing to or reading from swapped memory. A reason for this could be memory overcommitment. Pay attention if %SWPWT is >5

**ZIP/s**: Values larger 0 indicate that the host is actively compressing memory. Possible cause: maybe caused by high I/O VM.

**UNZIP/s**: Values larger 0 indicate that the host is accessing compressed memory. Possible reason: memory overcommitment.