



High CPU and virtual memory issues

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Monitor high CPU and virtual memory issues using Unified Operations Manager

Unified Operations Manager 8.6 and 8.7 provides an overview of CPU and virtual memory usage on your IM and Presence Service node. If usage is high, debug further using Unified RTMT.

Unified Operations Manager 9.0 reports on the memory usage of the IM and Presence Service node A Cisco DB service or cmoninit processes, the system overview, and also the CPU usage of the following services:

- Cisco Tomcat
- Cisco Presence Engine
- Cisco SIP Proxy
- Cisco XCP Router
- Cisco XCP Connection Manager
- Cisco XCP Web Connection Manager
- Cisco XCP SIP Federation Connection Manager
- Cisco XCP XMPP Federation Connection Manager

Monitor high CPU and virtual memory issues using Unified RTMT

Unified RTMT provides an overview of CPU and Virtual Memory usage using the CPU and Memory tool. This provides overall system usage statistics for all nodes in an IM and Presence cluster.

Unified RTMT allows monitoring of usage statistics, and individual processes using the Process tool. Every process on the server reports data for the following:

PID

The task's unique process ID, which periodically wraps, though never restarts at zero.

% CPU

The task's share of the elapsed CPU time since the last update.

Status

The task's process status: 0 - Running, 1 - Sleeping, 2 - Uninterruptible disk sleep, 3 - Zombie, 4 - Traced or stopped (on a signal), 5 - Paging, 6 - Unknown.

Shared Memory (KB)

The amount of shared memory, in kilobytes (KB), that a task is using. Other processes could potentially share the same memory.

Nice (Level)

The nice value of the task. A negative nice value indicates that the process has a higher priority, while a positive nice value indicates that the process has a lower priority. If the nice value equals zero, do not adjust the priority when you are determining if the task can be dispatched.

VmRSS (KB)

The virtual memory (Vm) resident set size (RSS) that is currently in physical memory in KB, including Code, Data, and Stack.

VmSize (KB)

The total amount of virtual memory, in KB, that the task is using. It includes all code, data, shared libraries, and pages that have been swapped out: Virtual Image = swapped size + resident size.

VmData (KB)

The virtual memory usage of the heap for the task in KB.

Thread Count

The number of threads that are currently grouped with the task. The negative value -1 indicates that this counter is currently not available because thread statistics (including all performance counters in the Thread object as well as the Thread Count counter in the Process object) have been turned off because the system's total processes and threads have exceeded the default threshold value.

Data Stack Size

The stack size for task memory status.

Page Fault Count

The number of major page faults that a task encountered that required the data to be loaded into memory.

High CPU issues

On IM and Presence Service, when you experience high overall CPU usage, Cisco recommends that you check the usage of the following processes that have historically caused high CPU on IM and Presence:

Process	Service
tomcat	Cisco Tomcat
jabberd	Cisco XCP Router
pe	Cisco Presence Engine
cm	Cisco XCP Connection Manager
cm_web	Cisco XCP Web Connection Manager
cm_sip_fed	Cisco XCP SIP Federation Connection Manager
cm_xmpp_fed	Cisco XCP XMPP Federation Connection Manager
cmoninit	A Cisco DB
sipd	Cisco SIP Proxy



Note

The cmoninit and sipd processes will both have 20+ individual instances, any one of which could be responsible for high CPU usage.

If the process consuming CPU is not in the preceding table, consult the following table for a list of other processes and their corresponding services. If the process causing high CPU is not in either table, the problem may reside with a system or platform service. Consult Cisco TAC for further assistance.

Process	Service
amc	Cisco AMC Service
AuditLog	Cisco Audit Event Service
auth	Cisco XCP Authentication Service
BPS	Cisco Bulk Provisioning Service
cdpd	Cisco CDP
cdpAgt	Cisco CDP Agent
certM	Cisco Certificate Expiry Monitor
CiscoDRFLocal	Cisco DRF Local

Process	Service
CiscoDRFMaster	Cisco DRF Master
CiscoLicenseMgr	Cisco License Manager
CiscoSyslogSubAgt	Cisco Syslog Agent
dblrpc	A Cisco DB Replicator
dbmon	Cisco Database Layer Monitor
EspConfigAgent	Cisco Config Agent
hostagt	Host Resources Agent
interClusterSyncAgent	Cisco Intercluster Sync Agent
jds	Cisco XCP Directory Service
LpmTool	Cisco Log Partition Monitoring Tool
ma	Cisco XCP Message Archiver
Mib2agt	MIB2 Agent
oamagent	Cisco OAM Agent
replWatcher	Cisco Replication Watcher
RisDC	Cisco RIS Data Collector
rtmtreporter	Cisco Serviceability Reporter
sappagt	System Application Agent
snmpdm	SNMP Master Agent
srm	Cisco Server Recovery Manager
syncAgent	Cisco Sync Agent
tc	Cisco XCP Text Conference Manager
tracecollectionsservice	Cisco Trace Collection Service
ttlogin	Cisco Login Datastore
ttreg	Cisco SIP Registration Datastore
troute	Cisco Route Datastore
ttsoft	Cisco Presence Datastore
xcpConfigManager	Cisco XCP Config Manager

High virtual memory issues

When experiencing high Virtual Memory usage on IM and Presence, Cisco recommends that you monitor the VmSize of the following processes:

- tomcat
- jabberd
- pe
- all of the Connection Manager processes (cm, cm_web, cm_sip_fed & cm_xmpp_fed)
- all of the sipd processes
- all of the cmoninit processes

