

# Webcenter Portal Sizing

Parameters	Derived Parameter	Formula
User Base		Users
Active Users, % of user base		ActiveUser%
Peak factor, % more		Peak%
	Peak Concurrent Users	=Users * ActiveUser% * (1+Peak%)
Thinking time		
Session timeout		Timeout
Transaction Per Second		TPS
Hits Per Second		HPS
Server Average Response Time		ART
Number of Machines		Machines
Number of JVM per machine		JVM
	Total JVM	=Machines * JVM
Heap (GB) Per JVM		Heap
	Machine Memory	MEM
CPU		CPU
Cores / CPU		CoresPerCPU
	Cores	=CPU * CoresPerCPU
CPU speed		CPUSpeed
	TPS / Core on Portal Tier	=TPS/Machines/Cores
WC CPU usage (WCP&WCC)		
DB CPU usage		DBCPUUsage
DB Core #		DBCores
	DB CPU usage with 1 core	=DBCores*DBCPUUsage
OHS CPU usage		OHSCPUUsage
OHS Processor #		OHSProc
	OHS CPU usage with 1 core	=OHSProc*OHSCPUUsage
SES CPU usage		SESCPUUsage
SES Processor #		SESProc
	SES CPU usage with 1 core	=SESProc*SESCPUUsage
OID CPU usage		OIDCPUUsage
OID Processor #		OIDProc
	OID CPU usage with 1 core	=OIDProc*OIDCPUUsage
Jive CPU Usage		JiveCPUUsage
Jive Processor #		JiveProc
	Jive CPU usage with 1 core	=JiveProc*JiveCPUUsage

## Calculated Sizing Criti

WC (WCP/WCC) TPS / core		PortalTPSPerCore
Concurrent users / core		ConUserPerCore

# ng Testing Data

Scenarios			Note
Content	Collaboration	Dynamic Portlets	
13330	2080	5920	
10%	10%	10%	
20%	20%	20%	
1600	250	710	$710 = 23.37 * (30 + 0.38)$
30s	30s	30s	
45m	45m	n/a	Impact memory
36.59	8	23.37	= Concurrent Users / (thinking time + ART)
99.54	18	n/a	
1.29	0.67s	0.38s	
2	1	1	
4	1	1	
8	1	1	
20	8	10	
85	10	12	memory unit: GB
2	2	2	
6	2	2	
12	4	4	
2.9GHz	2.33GHz	2.33GHz	
1.52	2.00	5.84	CPU utilization peaked ~65%
66%	83%	82.30%	
7.6%	21%	24.66%	
16	4	4	32 processors @ 2.9GHz
122%	84%	99%	
8.15%	0	0	
4	0	0	4 processors @ 2.33GHz
33%	0	0	
23.64%	0	0	
8	0	0	16 processors @ 2.27GHz
189%	0	0	
1.30%	2%	0	
16	4	0	4 processors @ 2.33GHz
21%	8%	0	
0	2%	0	
0	4	0	4 processors @ 2.33GHz
0	8%	0	

## cal Parameters

1.52	2.00	5.84	
66.65	62.4	177.6	30 seconds thinking time

Memory / core		MemoryPerCore
Corresponding DB cores		DBCORERatio
Corresponding SES cores		SESCORERatio
Other components cores		CompCoreRatio

## Samples Calculations

<b>Sample1: 100 TPS for collaboration scenario</b>		
	WC Cores needed	=TPS/PortalTPSPerCore
	Machine needed Portal midtier	
	Machine Memory Spec	=WCCores*MemoryPerCore
	DB Core needed	=WCCores*DBCORERatio
	Components Core needed	=WCCores*CompCoreRatio

<b>Sample2: 10,000 concurrent users for content scenario</b>		
	WC Cores needed	=ConUserPerCore/PortalTPSPerCore
	Machine needed Portal midtier	
	Machine Memory Spec	=WCCores*MemoryPerCore
	DB Core needed	=WCCores*DBCORERatio
	SES Core needed	=WCCores*SESCORERatio
	Components Core needed	=WCCores*CompCoreRatio

<b>Sample3: 40,000 concurrent users for content and portlet scenario (50%/50%)</b>		
	WC Cores needed	=ConUserPerCore/PortalTPSPerCore
	Machine needed Portal midtier	(WCP & WCC)
	Machine Memory Spec	=WCCores*MemoryPerCore
	DB Core needed	=WCCores*DBCORERatio
	SES Core needed	=WCCores*SESCORERatio
	Components Core needed	=WCCores*ComCoreRatio

## Other Formulas

TPS * (ThinkingTime+ART) = ConcurrentUsers		
UserBase * ActiveUser% * (1+Peak%) = ConcurrentUsers		

7	3	3	GB
0.50	0.21	0.25	
0.80	0	0	
0.20	0.40	0.00	

## ulation

	100		Translate to $100 * (30 + 0.67) = 3067$ concurrent users
	50		4 CPU & 8 cores/CPU
	2		For HA and active/active
	62.5		GB
	10.5		2 CPU & 8 cores/CPU
	2		2 CPU & 2 cores/CPU (can be combined with UCM machine)

12000			Translate to 100K user population
180			4 CPU & 6 cores/CPU
10			10 WC server machines
128			GB
9			2 CPU & 6 cores/CPU
14			2 CPU & 8 cores/CPU
4.0			2 CPU & 2 cores/CPU

48000			
98			4 CPU & 8 cores/CPU
4			4 WC server machines
174			GB
5			2 CPU & 4 cores/CPU
8			2 CPU & 4 cores/CPU
2.2			2 CPU & 2 cores/CPU

## ulas:
