

Constants		Main Process: O2 process controlled, configured and monitored by the O2 CCM systems. May launch many Worker Processes or threads and act as supervisor. Typically long-lived.							
# of Links	2500	Worker Process: O2 process, launched by a Main Process, not directly controlled, configured and monitored by the O2 CCM systems. Might be short-lived.							
# of FLPs	250								
# of EPNs	1250								
Main Processes									
Functional Block	FLPs		EPNs		Dedicated Nodes		Total		Notes
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	
Data Input	2500	2500	0	0	0	0	2500	2500	1 main process per link
Data Reduction	250	5000	1250	25000	0	0	1500	30000	Lower: 1 main process per node + Workers and/or Threads. Upper: 20 main processes per node.
Storage	0	0	0	1250	0	200	200	1250	CWG10 estimates: 4 current movers * 50 times more data rate to tape
Reconstruction	0	0	1250	25000	0	0	1250	25000	Lower: 1 main process per node + Workers and/or Threads. Upper: 20 main processes per node.
Simulation	-	-	-	-	-	-	-	-	It will run in O2 farm but not in parallel with data taking. Ignored for the time being.
Analysis	-	-	-	-	-	-	-	-	Will not run in O2 farm
Networking - Data Transport	0	0	0	0	10	20	10	20	CWG10 estimates
Calibration	0	250	0	1250	20	200	20	1700	CWG10 estimates
Condition and Calibration DB	0	0	0	0	1	10	1	10	CWG10 estimates
Data Monitoring	0	250	0	1250	100	100	100	1600	Lower: 0 per FLP/EPN; Upper: 1 per FLP/EPN.
CCM systems	250	750	1250	3750	60	600	1560	5100	Lower: 1 per FPN/EPN + 3 * 20 on dedicated nodes; Upper: 3 per FPN/EPN + 3 * 200 on dedicated nodes
TOTALS	2750	8000	2500	53750	131	530	7141	67180	
Worker Processes									
Functional Block	FLPs		EPNs		Dedicated Nodes		Total		Notes
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	
Data Input	0	0	0	0	0	0	0	0	0 CWG10 estimates
Data Reduction	0	5000	0	25000	0	0	0	30000	CWG10 estimates: Lower: thread based; Upper: 20 Workers per FLP/EPN
Storage	0	0	0	0	0	0	0	0	0 CWG10 estimates
Reconstruction	0	0	0	250000	0	0	0	250000	CWG10 estimates: Lower: thread based; Upper: 2 CPUS * # EPNs * 100 cores per CPU
Simulation	-	-	-	-	-	-	-	-	It will run in O2 farm but not in parallel with data taking. Ignored for the time being.
Analysis	-	-	-	-	-	-	-	-	Will not run in O2 farm
Networking - Data Transport	0	0	0	0	0	0	0	0	0 CWG10 estimates
Calibration	0	0	0	0	0	0	0	0	0 CWG10 estimates
Condition and Calibration DB	0	0	0	0	0	0	0	0	0 CWG10 estimates
Data Monitoring	0	0	0	0	0	0	0	0	0 CWG10 estimates
CCM systems	0	0	0	0	0	0	0	0	0 CWG10 estimates
TOTALS	0	5000	0	275000	0	0	0	280000	