

Common variables

Given

Redundancy	3
Disk size (TB)	1,80
Disks/node	2
Max disk usage	80%
Master nodes	3
Max shard size (GB)	50
Ideal max shard size (GB)	25
Ideal min shard size (GB)	20
Min shard size (GB)	10
Heap memory (GB)	26
Shards/GB of heap	50

Derived

Replicas	2
Storage/node (TB)	3,6
Effective storage/node (TB)	2,88
Primary storage/node (TB)	0,96
Secondary storage/node (TB)	1,92
Max shards/node	1300

50 nodes

Variables

Total nodes	50
Master nodes	3
Sniffer nodes	1
Data nodes	46
Primary storage (TB)	20
Replica storage (TB)	40

Primary shards

Index	Size (TB)	Shards					Size/shard (GB)	Percentage
		Min	Ideal min	Chosen	Ideal max	Max		
Files	16,647	341	682	512	853	1705	33,3	83,24%
Directories	3,319	68	136	256	170	340	13,3	16,60%
Invalids	0,021	1	1	4	2	3	5,4	0,10%
Partials	0,013	1	1	4	1	2	3,2	0,06%
Total	20,000	411	820	776	1026	2050		

Per node

Primary shards	17
Secondary shards	34
Total	51

100 nodes

Variables

Total nodes	100
Master nodes	3
Sniffer nodes	1
Data nodes	96
Primary storage (TB)	92,16
Replica storage (TB)	184,32

Primary shards

Index	Size (TB)	Shards					Size/shard (GB)	Percentage
		Min	Ideal min	Chosen	Ideal max	Max		
Files	76,712	1572	3143	1024	3928	7856	76,7	83,24%
Directories	15,294	314	627	512	784	1567	30,6	16,60%
Invalids	0,096	2	4	4	5	10	24,7	0,10%
Partials	0,058	2	3	4	3	6	14,8	0,06%
Total	92,160	1890	3777	1544	4720	9439		

Per node

Primary shards	16
Secondary shards	32
Total	48

15 nodes

Variables

Total nodes	15
Master nodes	3
Sniffer nodes	1
Data nodes	11
Primary storage (TB)	10,56
Replica storage (TB)	21,12

Primary shards

Index	Size (TB)	Shards					Size/shard (GB)	Percentage
		Min	Ideal min	Chosen	Ideal max	Max		
Files	8,790	181	361	1024	451	901	8,8	83,24%
Directories	1,752	36	72	50	90	180	35,9	16,60%
Invalids	0,011	1	1	4	1	2	2,8	0,10%
Partials	0,007	1	1	1	1	1	6,8	0,06%
Total	10,560	219	435	1079	543	1084		

Per node

Primary shards	98
Secondary shards	196
Total	294

5 nodes

Variables

Total nodes	5
Master nodes	1
Sniffer nodes	1
Data nodes	3
Primary storage (TB)	2,88
Replica storage (TB)	5,76

Primary shards

Index	Size (TB)	Shards					Size/shard (GB)	Percentage
		Min	Ideal min	Chosen	Ideal max	Max		
Files	2,397	50	99	20	123	246	122,7	83,24%
Directories	0,478	10	20	10	25	49	48,9	16,60%
Invalids	0,003	1	1	4	1	1	0,8	0,10%
Partials	0,002	1	1	1	1	1	1,9	0,06%
Total	2,880	62	121	35	150	297		

Per node

Primary shards	12
Secondary shards	23
Total	35

Baseline

Current

Index	Size (TB)	Shards	Size/shard (GB)	Percentage
Files	15,9	1024	15,9	83,24%
Directories	3,17	10	324,6	16,60%
Invalids	0,02	4	5,1	0,10%
Partials	0,012	1	12,3	0,06%
Total	19,102	1039		