High Severity Issues

Node	Issue	Details
199	OS Version	Ubuntu 18.04.1 LTS - Unsupported OS for this version
	Package-OS Mismatch	Variant ubuntu16.04 does not match recommended for OS
204	OS Version	Ubuntu 18.04.1 LTS - Unsupported OS for this version
	Package-OS Mismatch	Variant ubuntu16.04 does not match recommended for OS
207	OS Version	Ubuntu 18.04.1 LTS - Unsupported OS for this version
	Package-OS Mismatch	Variant ubuntu16.04 does not match recommended for OS
217	OS Version	Ubuntu 18.04.1 LTS - Unsupported OS for this version
	Package-OS Mismatch	Variant ubuntu16.04 does not match recommended for OS
218	OS Version	Ubuntu 18.04.1 LTS - Unsupported OS for this version
	Package-OS Mismatch	Variant ubuntu16.04 does not match recommended for OS
235	OS Version	Ubuntu 18.04.1 LTS - Unsupported OS for this version
	Package-OS Mismatch	Variant ubuntu16.04 does not match recommended for OS
238	OS Version	Ubuntu 18.04.1 LTS - Unsupported OS for this version
	Package-OS Mismatch	Variant ubuntu16.04 does not match recommended for OS

Medium Severity Issues

Node	Issue	Details
199	Installed RAM	15576 MB - less than recommended (16384 MB)
	File ownership	43 files in the couchbase install directory are not owned by couchbase:couchbase
	Possible Shared Storage	1 HBA found in dmesg
	MDS Services	index, n1ql - Only run 1 service per node in production
	Memcached Time Jumps	1 memcached time jumps detected, last was at 2019-03-26T19:24:41.829717+00:00
204	Installed CPUs	2 - less than the recommended (8).
	Installed RAM	15745 MB - less than recommended (16384 MB)
	Interface 'ens5' failures	RX:1 / TX:0 - Details: RX packets:5,201,838,051 errors:0 dropped:1 overruns:0 frame:0
	File ownership	43 files in the couchbase install directory are not owned by couchbase:couchbase
	Possible Shared Storage	1 HBA found in dmesg
	Slow operations	6 - Last slow operation was at 2020-02-13T00:36:46.573246+00:00
	View Indexing 'ecdapi'	Design Doc 'dev_hierarchylevels' took 1659.893 sec to update (average 0.188 sec) Design Doc 'dev_eventdocs' took 1063.321 sec to update (average 2.226 sec) Design Doc 'dev_history' took 1069.542 sec to update (average 2.634 sec)
	View property error	1039140 - Last error was at '2020-03-10T07:57:20.336'
207	Installed CPUs	2 - less than the recommended (8).
	Installed RAM	15745 MB - less than recommended (16384 MB)
	File ownership	43 files in the couchbase install directory are not owned by couchbase:couchbase
	Possible Shared Storage	1 HBA found in dmesg
	View Indexing 'ecdapi'	Design Doc 'dev_eventdocs' took 7617.755 sec to update (average 3.201 sec) Design Doc 'dev_history' took 2546.622 sec to update (average 3.389 sec) Design Doc 'dev_hierarchylevels' took 7430.215 sec to update (average 0.389 sec)
	View property error	1061414 - Last error was at '2020-03-10T07:56:05.473'
217	Installed CPUs	2 - less than the recommended (8).
	Installed RAM	15745 MB - less than recommended (16384 MB)
	File ownership	43 files in the couchbase install directory are not owned by couchbase:couchbase
	Possible Shared Storage	1 HBA found in dmesg
	Slow operations	8 - Last slow operation was at 2020-03-02T21:31:40.377681+00:00

	View Indexing 'ecdapi'	Design Doc 'dev_hierarchylevels' took 3315.921 sec to update (average 0.188 sec) Design Doc 'dev_eventdocs' took 1030.022 sec to update (average 2.084 sec) Design Doc 'dev_history' took 3313.503 sec to update (average 2.62 sec)
	View property error	1070762 - Last error was at '2020-03-10T07:57:22.043'
218	Installed CPUs	2 - less than the recommended (8).
	Installed RAM	15745 MB - less than recommended (16384 MB)
	File ownership	43 files in the couchbase install directory are not owned by couchbase:couchbase
	Possible Shared Storage	1 HBA found in dmesg
	Slow operations	7 - Last slow operation was at 2020-03-10T00:51:05.917859+00:00
	View Indexing 'ecdapi'	Design Doc 'dev_hierarchylevels' took 3328.563 sec to update (average 0.19 sec) Design Doc 'dev_eventdocs' took 1087.836 sec to update (average 2.122 sec) Design Doc 'dev_history' took 3350.311 sec to update (average 2.594 sec)
	View property error	1028829 - Last error was at '2020-03-10T07:58:45.435'
235	Installed CPUs	2 - less than the recommended (8).
	Installed RAM	15745 MB - less than recommended (16384 MB)
	File ownership	43 files in the couchbase install directory are not owned by couchbase:couchbase
	Possible Shared Storage	1 HBA found in dmesg
	Slow operations	9 - Last slow operation was at 2020-03-09T23:25:32.786663+00:00
	View Indexing 'ecdapi'	Design Doc 'dev_hierarchylevels' took 1633.532 sec to update (average 0.187 sec) Design Doc 'dev_eventdocs' took 1024.715 sec to update (average 1.895 sec) Design Doc 'dev_history' took 1010.417 sec to update (average 2.407 sec)
	View property error	1005490 - Last error was at '2020-03-10T07:59:00.469'
238	Installed RAM	15577 MB - less than recommended (16384 MB)
	Interface 'ens5' failures	RX:1 / TX:0 - Details: RX packets:4,475,274,299 errors:0 dropped:1 overruns:0 frame:0
	File ownership	43 files in the couchbase install directory are not owned by couchbase:couchbase
	Possible Shared Storage	1 HBA found in dmesg
	MDS Services	index, n1ql - Only run 1 service per node in production

Recommendations

1. Low resident ratio
The Active and Replica resident ratios for ecdapi buckets are critically low at 1% each. You should increase the per server Memory Quota for Data service from 3946 MB to 12000 MB and increase this bucket's quota from 2925 to 11000 MB right away.

2. Empty bucket
Bucket named cdmmp-ai is empty. You should remove it if it is not going to be actively used and assign its memory quota to ecdapi bucket that is starving for memory. Furthermore, you should bear in mind that even empty idling buckets consume resources.

3. Use of primary indexes
Primary indexes have been created for both buckets. These indexes should not dropped because they do not delvier the best performance. Besides, they carry the risk of executing a poorly written query that can result in full table scan and degrade the cluster's performance. You should always create targeted secondary indexes for your N1QL queries.

4. OS and CB package version mismatch
Installed OS is Ubuntu 18.04.1 LTS on each node, but the CB Server package installed there is meant for Ubuntu 16.04 LTS. This can mismatch can result in unforeseen issues.

5. Installed CPUs
Nodes 204, 207, 217, 218 and 235 have 2 cores each. Nodes 199 and 238 have 4 cores each. Recommended minimum for a cluster using Views is 8 cores. And given the overal number of Views, the cluster is showing signs of CPU pressure on all nodes.

6. Interface 'ens5' failures

Nodes 204 and 238 have logged the packet dropped issue against interface ens5. Please check the configuration of this interface, the health of the underlying network adapter and monitor the health of this interface.

7. File ownership
All nodes have reported that there are 43 files stores under /opt/couchbase that are not owned by couchbase user. Such files can pose a security risk. They can also use up disk space if their sizes are too large. You should identify these files and move them elsewhere or remove them altogether.

8. Possible Shared Storage
All nodes have reported presence of an HBA interface for shared storage. Using such storage presents a single point of failure and is against Couchbase best practices.

9. MDS Services
Index and Query services are co-located on nodes 199 and 238. You should run these services on dedicated machines as recommended here.

10. Slow operations, Memcached Time Jumps and long View indexing times
Several nodes have logged instances of slow operations, time jumps and slow View indexing. In particular, all Data nodes have reported very long indexing times for Views on bucket named 'ecdapi'. For example, it took 7617 seconds to update it on node 207. These issues are telltale signs of CPU being undersized. You should upgrade to nodes with at least 8 cores each.

11. View property error
Each Data node has logged over a million View property errors. These occur when a View is trying to access an attribute that does not exist in a document. These errors are logged at a very high rate and that can consume a lot of resources. You should review your View definitions and make sure that approprite level of error checking is being done.

12. Multiple views per design doc
Both buckets have multiple Views per design document. This results in very inefficient use of resources. It also prolongs rebalance times. You should maintain a 1:1 ratio between Views and design documents.

13. Installed RAM
Each node has slightly less than the recommended 16 GB RAM. You should upgrade to nodes with more RAM