

The Practice of Cloud System Administration: DevOps and SRE Practices for Web Services, Volume 2, 1/e

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Pg.	Error:	Correction:
20	Second paragraph, fifth line reads: A master server tracks the list of files and identifies where their chunks are. If you are familiar with the UNIX file system, the master can be thought of as storing the inodes, or per-file lists of data blocks, and the other machine as storing the actual blocks of data. File system operations go through a master server that uses the inode-like information to determine which machines to involve in the operation.	Should read: A coordination server tracks the list of files and identifies where their chunks are. If you are familiar with the UNIX file system, the coordination server can be thought of as storing the inodes, or per-file lists of data blocks, and the other machines as storing the actual blocks of data. File system operations go through a coordination server that uses the inode-like information to determine which machines to involve in the operation.

22-23	<p>Last paragraph-first paragraph reads: Now consider a situation where two servers cooperate in a master-slave relationship. Both maintain a complete copy of the state and the slave takes over the master's role if the master fails, which is determined by a loss of heartbeat—that is a periodic health check between two servers often done via a dedicated network. If the heartbeat network between the two is partitioned, the slave will promote itself to being the master, not knowing that the original master is up but unable to communicate on the heartbeat network. At this point there are two masters and the system breaks. This situation is called split brain.</p>	<p>Should read: Now consider a situation where two servers cooperate in a primary-secondary relationship. Both maintain a complete copy of the state and the secondary takes over the primary's role if the primary fails, which is determined by a loss of heartbeat—that is a periodic health check between two servers often done via a dedicated network. If the heartbeat network between the two is partitioned, the secondary will promote itself to being the primary, not knowing that the original master is up but unable to communicate on the heartbeat network. At this point there are two primaries and the system breaks. This situation is called split brain.</p>
27	<p>Figure 1.10: Read 1MB from SSD 1,000,000 ns (3ms)</p>	<p>Change to: Read 1MB from SSD 1,000,000 ns (1ms)</p>
67	<p>Implement Ephemeral Computing bullet, last line reads: It is unreasonable to build a large infrastructure to be used for such a short span time, but a cloud service provider may specialize in providing such computing facilities. In the aggregate the utilization will smooth out and be a constant load.</p>	<p>Should read: It is unreasonable to build a large infrastructure to be used for such a short time span, but a cloud service provider may specialize in providing such computing facilities. In the aggregate the utilization will smooth out and be a constant load.</p>
108	<p>Chapter 5, Section 5.4.5, 3rd paragraph, second sentence reads: In other cases, the cache is very small and obsolete entries will be eventually be replaced via the cache replacement algorithm.</p>	<p>Should read: In other cases, the cache is very small and obsolete entries will eventually be replaced via the cache replacement algorithm.</p>

125	<p>Chapter 6, Section 6.3.1, Third paragraph from the bottom reads: Suppose it takes a week (168 hours) to repair the capacity and the MTBF is 100,000 hours. There is a $168/1,000,000 \times 100 = 1.7$ percent, or 1 in 60, chance of a second failure.</p>	<p>Should read: Suppose it takes a week (168 hours) to repair the capacity and the MTBF is 100,000 hours. There is a $168/1,000,000 \times 100 = 1.7$ percent, or 1 in 600, chance of a second failure.</p>
126	<p>Section 6.3.2, third paragraph, fourth-fifth line reads: It is also known as an active–passive or master–slave pair. Often there are multiple secondaries. Because there is only one master, these configurations are 1+M configurations.</p>	<p>Should read: It is also known as an active–passive pair. Often there are multiple secondaries. Because there is only one primary, these configurations are 1+M configurations.</p>
126	<p>Paragraph above 6.4 Failure Domains reads: Sometimes the term “active–active” or “master–master” pair will be used to refer to two replicas that are load sharing. “Active–active” is more commonly used with network links. “Master–master” is more commonly used in the database world and in situations where the two are tightly coupled.</p>	<p>Should read: Sometimes the term “active–active” pair will be used to refer to two replicas that are load sharing. “Active–active” is more commonly used with network links. “Active-active” is more commonly used in the database world and in situations where the two are tightly coupled.</p>
135	<p>Chapter 6, 7th paragraph, third line reads: If a loss of heartbeat is detected, the secondary takes over and becomes the active load balancer. Any TCP connections that were “in flight” are disconnected since the primary is unaware of them.</p>	<p>Should read: If a loss of heartbeat is detected, the secondary takes over and becomes the active load balancer. Any TCP connections that were “in flight” are disconnected since the new primary is unaware of them.</p>
217	<p>Chapter 10, Section 10.3, 4th paragraph, second line reads: For example, there may tighter controls over who may initiate a launch for a new release into production.</p>	<p>Should read: For example, there may be tighter controls over who may initiate a launch for a new release into production.</p>

228	Chapter 11, 4 th paragraph, second line reads: A failed canary should be so rare that it is cause to stop development and dedicate resources to determining what went wrong and which additional testing needs to be added to prevent this failure in the future	Should read: A failed canary should be so rare that it is a cause to stop development and dedicate resources to determining what went wrong and which additional testing needs to be added to prevent this failure in the future
232	Chapter 11, First line reads: The longer one waits to merge code changes into the main line source, the more difficult and risky the merge becomes.	Should read: The longer one waits to merge code changes into the main branch source, the more difficult and risky the merge becomes.
235	Chapter 11, Point No. 2 reads: Code is modified to use the new schema fields and pushed into production. If a roll back is needed, it just reverts to to Phase 2.	Should read: Code is modified to use the new schema fields and pushed into production. If a roll back is needed, it just reverts to Phase 2.
245	Chapter 12, Section 12.1.1, third paragraph, third line reads: This view makes the unrealistic assumption that people are are infinitely versatile and adaptable, and have no capability limitations.	Should read: This view makes the unrealistic assumption that people are infinitely versatile and adaptable, and have no capability limitations.
265	Chapter 12, Section 12.7.2, 3rd paragraph, fifth sentence reads: When your work is complete, you “commit” or “ check out ” your changes.	Should read: When your work is complete, you “commit” or “ check in ” your changes.
266	Chapter 12, Section 12.7.3, 3 rd paragraph, third line reads: The result is many systems, all out of date, and all the problems that can bring.	Should read: The result is many systems, all out of date, and all the problems that it can bring.
276	First paragraph, last line reads: As Linus Torvolds said, “Many eyes make all bugs shallow.”	Should read: As Eric S. Raymond said, “Many eyes make all bugs shallow.”

280	Chapter 13, Section 13.5, third bullet, last line reads: Each review stage is noted with any comments, and revision numbers or dates track changes.	Should read: Each review stage is noted with any comments, and revision numbers or dates to track changes.
289	Just above “ Alert Frequency ”, the line reads: Follow the sun can be done with with two, three, or four shifts per day depending on where people are located.	Should read: Follow the sun can be done with two, three, or four shifts per day depending on where people are located.
348	Chapter 17, Section 17.1.3, 5th paragraph, fourth line reads: We can still calculate the rate: $(21,000 - 10,000)/600$, or * 18.2 API* calls per second	Should read: We can still calculate the rate: $(21,000 - 10,000)/600$, or * 18.3 API* calls per second
350	Java Counters sidebar, last sentence reads: Signed integers roll over to negative numbers and have a maximum value that is approximately half their signed counterparts.	Should read: Signed integers roll over to negative numbers and have a maximum value that is approximately half their unsigned counterparts.
353	Chapter 17, Section 17.3, 5 th paragraph, 5 th line reads: Near-term analysis is also used to generate tickets for problems that are not so urgent as to require immediate attention.	Should read: It is also used to generate tickets for problems that are not so urgent as to require immediate attention.
355	Chapter 17, Section 17.4.1, 3 rd paragraph, first line reads: The alert system is responsible for delivering the alert to to the right person and escalating to others if they do not respond.	Should read: The alert system is responsible for delivering the alert to the right person and escalating to others if they do not respond.
358	Chapter 17, Section 17.5, 3 rd paragraph, first line reads: Simple graphs can display raw data, summarized data, or a comparison of two more metrics.	Should read: Simple graphs can display raw data, summarized data, or a comparison of two or more metrics.

368	Chapter 18, Section 18.1.1, 4 th paragraph, third line reads: To make sure that you have covered avery possible aspect, talk to people in every department, and find out what they do and how it relates to the service.	Should read: To make sure that you have covered every possible aspect, talk to people in every department, and find out what they do and how it relates to the service.
471	5 th paragraph, third line reads: The information was converted to a “wire format,” which meant making a copy read for transmission and putting it in a packet.	Should read: The information was converted to a “wire format,” which meant making a copy ready for transmission and putting it in a packet.
477	6 th paragraph, second line reads: For example, two systems that are both $O(n^2)$ will not to have the exact same performance.	Should read: For example, two systems that are both $O(n^2)$ will not have the exact same performance.
479	5 th paragraph, third line reads: Instructions execute in parallel when they are provably independent.	Should read: Instructions execute in parallel when they are probably independent.