

"Justin Moles" <j-moles@northwestern.edu>

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A. Brown and J. Hellerstein, Reducing the Cost of IT Operations - Is Automation Always the Answer?

Summary - In today's IT environments, automation is usually viewed as a cure all to the problems faced system administrators. These problems, such as installation of new software, updating current software and repairing and optimization of software, currently are addressed manually by IT professionals who are trained and experienced with the software in question. This generally is fairly expensive and time consuming. The push for automation hopes to reduce or eliminate this manual influence in favor of letting the computer handle the complexity so human operators can focus more on high level decisions. This paper argues that automation may not always be economical or efficient as compared to manual intervention. In particular, it points out the hidden costs of automation will sometimes increase the cost of software well beyond what currently exists today.

Pros - The paper looks at current proposals for automation of various processes and points out hidden flaws and costs. It also creates some guidelines that can help system administrators decide how much automation they require to effectively and efficiently do their jobs.

Cons - It ignores some of the main reasons automation is usually desired, namely the amount of training and experience necessary for a system administrator to do his job currently. While it points out many hidden costs of automation, it ignores this hidden cost of manual operation. In addition, it doesn't consider that if automation becomes a new standard operating technique, the overall cost of automation will go down. These are important considerations the paper seems to ignore.

Overall - This paper is very interesting overall. It points out many flaws in current arguments for automation that are currently being ignored by those who see it as a messiah for IT. On the other hand, it ignores how much "black magic", to use a phrase often used by IT guys, experienced system administrators must learn to effectively do their jobs. In the future a work that takes into account that factor along with guidelines proposed in this paper will be able to give a good estimate on when and where automation should be applied.