AN INTRODUCTION TO OPERATIONS RUNBOOKS



It's difficult to overstate how complex the modern IT world is. In fact, we've written at length about complex systems here on our BMC Blog. This inherent complexity makes IT a particularly difficult department to train for and optimize. Fortunately, the IT industry has long attracted the attention of some of the world's greatest thinkers who have developed methods for turning dauntingly complex tasks into fairly simple jobs.

One such tool developed to help ease the pain of IT complexity is what is known as an operations runbook.

What is an Operations Runbook?

Operations runbooks, often simply called runbooks, are a set of standardized documents, references, and procedures used to describe common IT tasks. Runbooks are created for the purpose of walking someone through the steps necessary for accomplishing a specific task or troubleshooting a particular issue. These are useful both for longtime professionals and people new to their IT duties.

One of the primary benefits runbooks offer is preventing the need for reinventing the wheel each time a task is encountered. Once an effective method is established for accomplishing a given task, the runbook can be updated with detailed instructions for repeating the task. This allows people who are unfamiliar with the task to accomplish it easily while also enabling the optimization of tasks over time.

Runbooks also help old hats in the IT world to refresh their memory when they encounter an issue they haven't dealt with in some time. Most people have fairly limited memory for very specific tasks, and if they haven't performed those tasks in some time, their recollection will grow foggier. Runbooks can be used to quickly remind IT professionals with specific details regarding how they overcame previously encountered issues.

Operations runbooks are great for incident response teams.

Runbooks are fantastic tools for dealing with emergency operations tasks. With the help of a runbook, IT professionals can take advantage of knowledge and expertise from subject matter experts (SMEs) without needing to call them up every time an incident occurs. This empowers emergency response teams to tackle tasks even with only a small skeleton team on call, thus improving incident resolution times without needing to scale up the size of on-call teams.

Having detailed and up-to-date runbooks can drastically cut down on time spent with the initial process of understanding the problem and then creating a solution for it. Whenever an issue is encountered and a solution is found for it, runbooks can be updated with the methods created for tackling that specific problem. As more of those issues are encountered, someone might discover a more effective way of dealing with the issue and the new methodology can be added to the runbook, ensuring it's updated with the most relevant and recent information.

Runbooks help ensure your IT operations run smoothly.

Runbooks are also great for handling routine tasks that maintain your IT systems and applications in perfect working order. Runbooks can be used for tasks like database backups, rebuilding indices, and updating access permissions just to name a few. Utilizing a runbook for these common operations will ensure that they are performed in a consistent manner that will drastically cut down on mistakes while also reducing the time spent on the tasks themselves.

Well-developed runbooks are fantastic tools for identifying tasks that are candidates for automation. Once tasks have been selected for automation, the runbooks offer detailed directions so automation efforts can hit the ground running since the tasks are already outlined in a step-by-step manner perfect for developing scripts and automated processes. Runbooks can also be valuable sources of insight into operations metrics.

It should be clear by now that runbooks are amazing tools, but how can you get started creating your own?

How to Create an Operations Runbook

An effective runbook should be easy to understand, consistent across all applications and departments, and accurate. This means that the best runbooks are living documents that are constantly evolving as systems are updated and new applications are introduced. When creating a runbook from scratch, it's important to focus your efforts on the most essential tasks and the best way to identify those is through the use of detailed incident reports and postmortems.

Postmortems are a great place to start when creating a runbook as they should provide details on the timeline of the incidents and the ultimate conclusion of how the incident was successfully handled. By collecting and analyzing past postmortems, you can identify the most commonly

occurring incidents and see which solutions were most effective at resolving the issues.

Runbooks can be adapted directly from postmortems but this doesn't mean that they should replace them. Each incident will have unique aspects to it that won't be addressed by the runbooks, and runbooks shouldn't be bogged down by details unnecessary for accomplishing the outlined tasks.

Use the findings from your postmortems to build basic action plans that detail specific steps for resolving issues, such as who should be contacted when the issue occurs, where documentation for the system can be found, and other relevant details that will aid someone in resolving the issue. Your ticketing system should ideally serve relevant runbooks alongside the occurring incidents so the team member can take immediate action based on the information provided within. This improves the consistency of the runbook's application while also reducing response time and resolution time for incidents.

Once you've created your runbook, put it to the test by using it to solve real-world issues and then analyze the results of its use. As we mentioned above, runbooks are living documents and should be in a constant state of improvement to ensure that tasks are optimized while taking into account new information and changes in the system's structure that happen over time.

Optimization is an ongoing task that is impacted by events inside and outside your IT systems as new products are developed and different methods are implemented. Focusing your initial runbook creation efforts on the highest frequency issues will ensure you can measure the impact of your runbooks more effectively. Once you've nailed down the process, you can begin branching out to more nuanced runbook tasks.