The Application Audit

Trust, but verify.

—Ronald Reagan

One drink ain’t enough, Jack. You better make it three.

—George Thorogood

The application audit is what I consider the fundamental element of APM technology. It prepares and validates the monitoring configuration, dashboards, and alerts so that the APM tool is tailored to your applications. And it also establishes a foundation for more effective triage. If you learn to do nothing else with APM than to deliver this competency, you will not be disappointed.

An application audit does not result is a grade or score. It is more like a statement that you exercised due diligence\(^1\) in evaluating the performance aspects of the application, much the same as if you were going to invest your money in a start-up opportunity. What is the technology like? How do they manage their resources? How can I promote the product? Do I know enough to keep them on track, if they get into trouble? You really want to know the same about your application candidate. What kind of resources does it employ? Does it manage memory and connections well? Can I determine the best metrics for availability, capacity, and performance that I might want thresholds and alerts on? Do I have enough visibility to triage performance problems once we get to production?

To get all of this information, look to the APM instrumentation technology to get visibility into the component relationships. If that is not available, you can also survey the transactions or conduct an interview-based assessment, as with Chapter 3. Your best audit findings will come from APM instrumentation, where applicable.

Of course, you can do much more with APM technology, as discussed elsewhere. All of those higher uses ultimately depend on the information gathered during an audit. Doing a competent job here is the gateway to maximizing the benefits of APM when your organization is ready.

Conversely, if you do not have access to someone who understands how to conduct an audit, you have little chance of leveraging APM consistently in an independent fashion. Your circumstances may dictate reliance on professional services to set up and maintain your APM infrastructure, which is a perfectly valid business model (discussed in Chapter 2). Organizations evolve at their own pace. My goal is to simply inform you of what is needed to realize APM independently, should you have the opportunity.

If you are comfortable with load generation and baselines (Chapters 11 and 12), then you are ready for an audit. All you are really adding to those basic, mechanical skills is a scope, a process, and a report—and a little bit of subjective interpretation. You need to indicate honestly what you think the prospects are for this application in its current state. And you need some solid recommendations as to what should be done to improve the situation. This requires some experience and practice, which is what turns a collection of skills and processes into a valuable service offering for your internal clients. Your audit skills will also benefit from the triage with single metrics, discussed in Chapter 14.

**Kick Off Meeting**

An audit is an opportunity to compare and contrast observed performance. The challenge is to have some reference to compare and contrast against. I will discuss a number of reference strategies but the fundamental goal is to decide if the target application is ready for production. Even if you are limited to a QA system with APM, it’s important to keep this goal in mind. So what needs to be done to confirm that the APM configuration is production-ready? If you think about how operations and triage teams need to solve incidents or understand performance, then you will have the right frame of mind to select the significant components, organize dashboards, and assign thresholds. From the thousands of metrics that may be available, you need to identify and manage the ones that matter. The first question you need to answer is “Do I have sufficient visibility in order to manage this application in production?” When you can say “yes” to this question, then you have completed the audit.

Once you have the metrics that matter, you can then apply your triage skills and decide if these metrics are exhibiting correct (or expected) behaviors. The second question is “Is the application stable for its intended use?”