The difference between Static and Dynamic Response Time Alerting

Information:

Environment
• Dynatrace Portal • Dynatrace Synthetic Monitoring Platform

Solution
Dynatrace Synthetic Monitoring offers alerting services based on the response times gathered on a per node basis. The level at which you are alerted at can be configured in a static or dynamic fashion. **What is the difference between Static and Dynamic alerts?** In the response time alert setting, you can set your alert to be triggered based on a static or dynamic result, and both of them are used to report test performance of nodes. For a static threshold, you should know the past average response time for your website on a per node basis, or some response time that you expect your website perform at. When you know the expected performance, you can define the warning and severe threshold by adding on several seconds in the static threshold section. For example, in the static alert setting, if the usual performance for a website is about 10 seconds you may want to set the warning threshold to 15 and the severe threshold to 20. In this case if the response time on any node is between 15-19 seconds, the node will be at warning status, and if the response time at 20 seconds or above, the node will be in a severe alert condition. For a **dynamic** threshold, you don't have to specify the exact response time for your test, instead you should define the tolerated percentage or seconds that current test result differs from the past records. With this you can define if the current average (define time of average) exceeds the historical average (define time of average) by "X"% OR seconds, the node will go into an alert status. For example say you set the "current response time average" at 2 hours then used the "seconds" option and put 3 seconds in Warning and 5 in severe, then finally set the "historical response time average for" 1 day. When the test runs it will get the response time. It will then run a calculation to look at the average response time over the last 2 hours (for just that node). It will also compute the average response time over the last 1 day (for that node). If the current average exceeds the historical average by 3 seconds, that node will go into a waning alert status. If the current average exceeds the historical average by 5 seconds, that node will go into a severe alert status. The percentage feature works the same way only basis it on a % increase instead of a set "second" increase. If you have and want to maintain a very steady response time, and you use few nodes (or they all have a similar response time), you may want to use a Static alert setting. This way you are alerted on a pre-set number you define. However, if you know your performance has an acceptable up and down pattern to it, or different nodes have drastic result differences, you may only want to be alerted on drastic change instead of a set number. In this case, you would want to use Dynamic alerting.