[eyebrow] Comment | Information Matters
[hed] Stronger Measures
[dek] Too Many Unexceptional Facts
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For thousands of years we have used measurements in all walks of life, even if our early practices were a bit more approximate than they are today. For a very long while, a foot of measurement was actually the length of your foot.

Fast-forward a few millennia, and we not only have precise linear scales, but we have measured the weight of the earth, the age of the universe, and the size of various sub-atomic particles.

Business and IT operations greatly depend on measurements as well. However, there is such a thing as too many measurements, and too many facts. Chances are, if you are worrying about how many semaphores your UNIX kernel uses, or how many roll-back segments your database needs, then you are using time that could be spent worrying about something better, like what's for dinner.

The developers of Oracle database have been hard at work reducing the critical measurements that a DBA has to worry about, from 300 system parameters a few releases ago to just 30 basic parameters today in Oracle Database 10g—along with 200 "advanced" parameters that will hang around for old times' sake. Oracle is systematically reducing the amount of arcane machine language administrators need to be concerned with as well, in favor of broader metrics such as "do I have enough memory?" and clearer directives such as "no matter what, recover in two minutes."

In fact, the developers of Oracle database feel that the problem of single-box administration is pretty well solved. Administering Oracle servers is far easier and faster than it's ever been, which is why DBAs working with Oracle Database 10g can now deal with a dozen or more machines at once. Only a few years ago, the average DBA looked after just two or three machines.

The measurements asked of IT departments are also changing. Increasingly, the concerns about transaction throughput and system capacity have given way to issues of application service levels and response times. Rather than measuring discrete machine resources such as CPU levels and I/O buffers, IT administrators now focus on measuring and managing collections of systems. They approach system management at a different level, focusing more on strategies and policies than tactics and techniques. This reflects the changing role of IT: from an independent, black arts R&D organization to a business entity that affects a company's bottom line.

As technologists, we love to know how things work, but few of us want to spend time rearranging electronic deck chairs on the Titanic. The long association of DBAs and administrators as essentially a life-support system for our fragile silicon-based denizens is no longer viable. DBAs want to have an impact and don't want to have their time wasted.

That is why we see such clear advantages to moving from ad hoc systems management to a grid infrastructure. With potentially dozens or even hundreds of nodes comprising a grid, there is less need to actively monitor individual computers. Rather than constantly checking on each individual machine, the machines notify *us* when they are not feeling well.

This is known as management by exception and it is one of the principles of Oracle Enterprise Manager Grid Control. Because measuring individual machines now requires less time and effort, administrators are free to consider more complex or anomalous problems. With any serious software, there's nothing worse than a problem that can't be reproduced predictably. We encounter such problems all the time, often as a result of some race condition, resource constraint, or, in severe cases, gremlins.

That's why the developers of Oracle Enterprise Manager Grid Control have created a series of software agents and beacons that line the pathways of applications across machine boundaries: from the end user, through an application server or two, across a couple of databases, and back. Statistics and status information are relayed back to Oracle Enterprise Manager Grid Control so that in case a phantom glitch does appear, we have all the accurate measurements we need to get to the bottom of things.

But making accurate and meaningful measurements is also important outside the IT arena. Business questions for which there are no traditional metrics, such as corporate performance or regulatory compliance, are now asked and answered across several Oracle product families. Specifically, in the Corporate Performance Management application family, Oracle has implemented balanced scorecard functionality that can help companies define, communicate, and yes, measure the success of a business strategy.

Balanced Scorecard is a management methodology that seeks to measure corporate performance using factors beyond financial results. This includes customer satisfaction, internal operations, innovation and other metrics. While Oracle is not the only company to implement balanced scorecard, its integration with its Oracle Daily Business Intelligence (DBI) is unique and powerful. Oracle DBI packages up hundreds of key performance indicators which are used to manage important business processes across financials, supply chain, CRM and more.

We ask many questions of our technology, and we expect both the questions and the answers to get more interesting. While sometimes we might feel that the way we ask some of these questions is akin to measuring the sky with a ruler, at least it's easier than using our feet.

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