Observability: Embedding control

Upcycling the concept of observability to deliver relevance in modern DevOps cultures

Observability as a concept may not be new but it is most definitely back into the buzzword lexicon in 2020. It has been a part of the application process management (APM) culture for a long time and its core components and tents have been immersed in tech culture and conversation for years. Today its buzzword status has been earned thanks to the need for end-to-end observability in DevOps as emerging technologies drive cultural changes in organisations. According to Enlin Neveling from [Atvance Intellect](#), observability stems from control theory which is a subfield of mathematics, computer science and control engineering and should form a critical component of any DevOps-driven organisation to ensure that it gets the right results within a rich development framework.

"Observability is essentially how much of the internal state of a system can be deduced by leveraging knowledge gained from external outputs," explains Neveling. "This means that the depth of observability allows for better understanding around the system state which improves control over its behaviour. Observability reduces stress and friction between teams, it provides real-time understanding and helps organisations become more agile."

Observability as a concept can be broken down into three core components: observe, monitor and analyse. Observe is defined by how much of a system's state is inferred by external outputs; monitor by the task of collecting the data from those outputs and putting it on display; and analysis as the understanding of the data and how it can be leveraged appropriately. Analysis is critical to really teasing out the strands of insight from the data – without it, the business simply has a pile of data will little to show for it except, well, a pile of data. The data-to-everything platform, Splunk, has also published an eBook that defines observability and offers the beginner crucial insights into how the process works and the value it offers.

According to [Splunk](#), gaining insights from data is more than just collecting and analysing metrics and logs. It's visibility into the entire architecture, it's site reliability, it's understanding the business from across every digital nook and dev cranny, and this is how observability can play a crucial role in understanding the IT stack and getting the right

"The better your analysis capabilities, the better your return on your investment into observability and monitoring," says Neveling. "This can be either manual or automated analysis and many companies use both and it is an essential part of observability as a concept."

The need for observability is being powered by how DevOps cultures are evolving within organisations, looking to improve their end-to-end automation of CI/CD processes across containerisation, microservices and polyglot environments. It is an exciting concept that requires a definitive investment from the organisation in order to redefine teamwork and the development of modern applications.

"The benefits range from delivering high-quality applications at speed and scale, allowing organisations to respond faster to emerging changes within the systems," says Neveling. "This ultimately delivers an optimised customer experience and richer customer engagement. Perhaps the most exciting factor is that observability plays a pivotal role in the development of data-driven cultures within organisations because these are more innovative and agile."

In addition to streamlining teamwork, observability provides shared views that can be used by teams to improve oversight and insights into business and process. It reduces alert and investigative fatigue as it can highlight stress points along the DevOps road, and it can help teams understand failures and problems more effectively. It even offers the opportunity to resolve tensions involved in code changes which allows for the organisation to release code faster and with greater confidence. With the returns including faster time to market, reduced total cost of ownership, and real-time trends analysis and forecasting, it's hardly surprising that observability has become such a popular ethos in the modern organisation.

"While traditional monitoring may be enough for simple applications, observability best serves organisations that use microservices, containers, cloud, server and serverless technologies," adds Neveling. "The complexity of modern applications and diversity in technical disciplines makes observability an essential tool for holistic insights."

Central to the premise of observability is people. People are the teams of diverse and highly skilled IT professionals and people are the customers that want the experiences that keep them coming back for more. Atvance Intellect recognised that people are central to its success, focusing on building teams of intelligent and passionate IT experts that understand the concepts, challenges and intricacies of DevOps and the organisation. This passion and expertise filters through the work that the company does with its clients, delivering on the concept of observability and ticking the boxes of monitoring and analysis with ease.

"We provide our customers with solutions that make a tangible difference and that demonstrate measurable return on investment," concludes Neveling. "Observability is another powerful concept that's part of a much bigger picture that we bring to our customers that will help them in their journey and deliver relevant value so that they can make better decisions."

Download the Beginner's Guide to Observability today.

ENDS

Boilerplate

ATVANCE INTELLECT helps organisations attract new customers, optimise processes, and drive sustainability, profit and growth by assisting them to leverage their intellectual capital. Bringing together all the secure data sources that a company has at its disposal, we apply data to every question, decision and action, transforming it first into information, and then into actionable intelligence to maximise business objectives and goals.

Our deep understanding of the data-driven technology landscape inspires us to find new and innovative ways of unlocking value, helping you better understand your business landscape and achieve your objectives. We take all your data points and sources and turn them into assets that can translate into growing a successful business.

Sean Raubenheimer – General Manager | +27 74 589 5440 |Sean@atvance.co.za