

Copy data virtualisation holds promise for SA's manufacturing sector

The ongoing digitisation of industrial production - industry 4.0 and the Internet of Things (IoT) ensures that more and more machines are networked. In the manufacturing industry production and storage systems are increasingly able to: exchange information automatically; initiate actions and control each other.

Making data usable



Stuart Miles via [freedigitalphotos.net](https://www.freedigitalphotos.net)

Harold van Graan, sales director, Actifio - copy data virtualisation specialists - says the aim is to improve processes not only in production but also to improve and accelerate development, construction and service, during the entire product life cycle. Van Graan says the name of the game is "making data usable."

"Networked machines and self-controlling production processes increase the competitiveness in the manufacturing industry through increased efficiency, improved opportunities for customised individualisation and faster time-to-market. Through industry

4.0, new information relationships arise to connect ERP systems, databases, the internet and real-time information from factories, supply chains and products. RFID, machine-to-machine communication and the IoT connect not only production and delivery processes but also generate a lot of data.

In order to facilitate communication of the 'smart' factory, huge amounts of data need to be retained. Also during production processes data constantly emerges. This avalanche of data should be faced not only with greater storage resources - in order to cost-effectively save the data - but it is also important to make the data more usable. The potential benefits of Big Data is not only popular in the services sector but is also one of the biggest future challenges for the manufacturing sector," he says.

He emphasises that in order to cope with the challenges posed by industry 4.0, but also to exploit the immense potential, manufacturing companies need to limber up their production and IT facilities. "It comes down to the storage of large amounts of data, which can be accomplished in a reasonably budget-friendly manner by integrating cloud resources or storage optimisation. But even new storage technologies such as Solid State Drives (SSD) are not yet so cost-effective, that they could catch the progressive growth of data at a reasonable cost. The rapid analysis of data is becoming increasingly important but how can it be combined with cost-effective storage of large amounts of data and quick availability of individual data from the pool?"

Virtualised data copies

Here efficient data management is needed - and copy data virtualisation is a proven approach. Virtualisation of the concept behind this is a platform specifically designed for the creation and management of virtual data. An appropriate solution replaces various data silos, where traditionally redundant physical copies of data for backups, snapshots, business continuity, disaster recovery, as well as test and development, analysis, and other applications are kept.

He adds that much of the data in circulation in business is actually copies, with the IDC estimating that [60 percent of the data stored in data centres](#) is a copy of the same data or extremely outdated copies.

"The vast majority of stored data is excess copies of production data that is generated by different applications. Manufacturing companies are currently focused on trying to cope with the growing mountain of data generated by networked machines, but mostly by intentional or unintentional copying. Far more rarely do they go to the bottom of the actual cause of the duplication of data copies. However, what they should be focusing on is the avoidance of uncontrolled

data growth. Only by making this their highest priority will they manage to yield maximum value from the potential of the data."

He emphasises that few companies have taken the decisive step towards more efficient data management in the form of the creation of virtual copies of production data. "Thus they decouple the data from its underlying infrastructure. If companies reduce redundant data on a single physical golden copy of their production data, much less storage space is required. From this master copy, countless virtual copies can be created as and when needed.

Getting insights: ROI

"In ROI, I am referring to return on insights. The storage and data management implications for IoT and Industry 4.0 cannot be considered without taking into account the cost of doing the same things with the same tools and the implications of not finding those key insights from the data. The more data that is collected and stored (i.e. sensor data) then we will be able to quickly find patterns and insights. However, if the cost of storing and managing IoT data outweighs the potential benefit, there is a problem."

He says the sooner companies reduce the amount of their superfluous physical copies, the less time and money they will have to spend on their management and archiving and the sooner they can benefit from more efficient data analysis in the age of Big Data, Industry and 4.0 IoT.

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