

**datacentrix**

Serious about performance, passionate about value

# ***infocentrix***

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**2019**

**ENABLING  
DIGITAL SUCCESS**

**Infocentrix is an official newsletter for the Datacentrix Group, its partners and customers.**

Datacentrix is a complete ICT systems integrator, providing solutions and services across the full information value chain. The company's value-driven approach and proven execution capability reinforce its position as one of the top ICT players in the market.

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**We would like to thank our technology partners for their support and input into this issue:**

**Aruba  
Cisco  
Hewlett Packard Enterprise  
Nutanix  
Red Hat**

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# Datacentrix enables digitalisation success



**As an integrated ICT solutions provider, Datacentrix uses leading technologies to deliver sustainable value to our clients across Africa and the Middle East.**

We weave the threads of disruptive technologies into a single cable that guides, strengthens and accelerates the digital transformation of workflows, processes, businesses and ecosystems.

Whether a client's end goal is to achieve a private cloud within their environment, or attain operational efficiencies through improved processes, Datacentrix partners with our clients to help guide their technology decisions, enabling effective, forward-thinking business.

Our specialist teams leverage the power of information and communications technologies to connect, transform, improve and future-proof business, supporting our clients throughout their digital journey.

**Bringing digitalisation into focus**

Digital transformation means integrating digital technology into all areas of business, changing how businesses operate and how they deliver value to customers. We help organisations take better advantage of the information that is constantly being created, manipulated, shared across networks and stored in ICT infrastructures.

Datacentrix has recently revamped its Business Applications division, now Digital Business Solutions, to align its offering with the sharpened digitalisation focus of the business. The division addresses how we progress our clients across the applications space and encompasses five focus areas, including: consulting services, comprehensive digital solutions, enterprise resource planning (ERP), Identity and Access Management (IDAM) and professional services. We have and continue to invest in technologies that deliver excellent customer experiences.

**Rest of Africa and the Middle East**

Datacentrix operates across 33 countries in the rest of Africa, deploying technologies and providing maintenance and support services to clients.

We have also established two entities, namely Datacentrix Solution DMCC and Datacentrix Solutions LLC, which operate in Dubai (UAE) and Doha (Qatar) respectively, providing support to the Digital Business Solutions.

**Certifications**

Empowerment is a priority on management's agenda and an integral part of our business culture and strategy. Datacentrix is pleased to announce that it has maintained its Level One Broad-based Black Economic Empowerment (B-BBEE) rating for the third consecutive year. The rating is maintained in terms of the new code levels. As a designated supplier, clients receive 135 percent procurement recognition.

Datacentrix has also been awarded the ISO 27001 certification of its Information Security Management System (ISMS). The certification is a framework of policies and procedures that includes all legal, physical and technical controls involved in an organisation's information risk management processes.

Finally, the company pursues technical certifications at the topmost level with its technology vendors. This issue highlights some of the partner awards and certifications that Datacentrix has achieved.

**Ahmed Mahomed**  
CEO

# Assmang opts for global first-of-its-kind mobile data centre with Datacentrix at Khumani Mine



**Mining** organisation, Assmang, is rolling out a world-first mobile data centre solution at its Khumani Iron Ore Mine in the Northern Cape province to meet its fast-growing information storage requirements. The solution was proposed, designed and deployed by Infracol, Datacentrix' infrastructure design and deployment business unit.

Ferdi Kirsten, manager: information technology at Assmang Khumani, explains that the mine needed to update and

expand its previous server room, which was designed in 2006 prior to Khumani becoming operational in 2008. "The original Khumani server room had become far too small for our needs – the 4m x 4m room containing six racks meant that there was very little space to manoeuvre and we had experienced some issues with cooling."

Assmang invited Datacentrix to join the tender for the project, and according to Kirsten, the solution provider submitted the winning proposal for a specialised, fire protected mobile unit, which would be the first of its kind to be installed in South Africa.

"The container features a next-generation Huawei Fusion Module 2000 modular data centre solution integrated with cabinets, power supply and distribution, cooling and cabling, and management. The Huawei Fusion Module 2000 Containment System comes with Tier ready stamp of approval from Uptime Institute." The fact that this technology is located within a protected mobile unit, which is also fitted with vibration pads to protect equipment from vibrations caused by nearby mining machinery, is the first implementation of its kind in South Africa," Kirsten says.

The implementation was not without some challenges, clarifies Bennett Naidoo, Infracol business development manager at Datacentrix. "Our initial plan was to build the entire solution at the mine. However, there were certain constraints around the stringent health and safety requirements to be approved prior to working on site at the mine. In addition, it was difficult to obtain the correct approvals to enter the site over weekends and out of office hours.

"Therefore, we had to come up with a strategy that could speed up delivery, making the decision to construct



**Ferdi Kirsten,**  
**Manager:**  
**Information**  
**Technology at**  
**Assmang Khumani**



The company's integrity and ownership of this project has been excellent.

two 3m x 13m modules at the factory. The two sections – each one 11 tonnes – were transported to the mine, lifted over the Khumani administration building using a crane, and placed in position.

“Fortunately, Assmang quickly approved our team's request to perform work on site, signing off our safety, health and quality specifications without delay. The two sections were successfully lifted and rigged into position with no difficulties.”

The state-of-the-art mobile data centre will provide Khumani with greater agility, as the solution can physically be moved as needed. “The new data centre was built with an eye on our future needs,” says Kirsten. “It will serve us well into the future, considering that our previous server room was operational for 11 years, and we foresee the new solution's life expectancy lasting even longer.”

Additional benefits for Khumani include rigorous security measures that were not in place previously, such as access control, CCTV and motion detection. The unit can also be monitored and managed remotely, with proactive alerts sent via mobile devices, and includes cold aisle containment to solve issues related to the heat. Says Naidoo: “The four air conditioner units are configured in N+2 configuration to cater for the extreme heat conditions experienced in Kathu, and the uninterruptible power supplies (UPSes) within the unit are configured as N+1 for redundancy.”

“Datacentrix' Infracol team has operated in a highly professional manner, right from the pitch to now. The company's integrity and ownership of this project has been excellent,” Kirsten concludes.



# Local automotive company drives down ICT costs by almost R1 million in one year

**The South African** operations of a leading manufacturer of trucks, buses and coaches has seen huge ICT-related cost reductions since the rollout of a dual connectivity WAN country-wide by Datacentrix company, eNetworks.

The project has seen the company save almost 50 percent on data service costs alone, while also increasing bandwidth.

“As an automotive organisation, IT is not our core focus but we're under continual pressure to keep our systems as cost effective, and yet as value-driven, as possible,” explains Moosa Jogee, head of IT at the company. “Around a year ago, the decision was taken to put out a tender to take our WAN to the next level – with the requirement to utilise multiple, vendor-agnostic technologies and dual connectivity for greater efficiencies, redundancy and stability. Additionally, we needed a strict service level agreement (SLA) to be put in place.

“Pricing played a critical point in our decision-making process, as did the need for a service provider that could provide strong account management, not only to forge a more personal partnership, but also for faster decision making.”

Datacentrix' Group internet service provider and network specialist company, eNetworks, was awarded the tender based on its competitive pricing and Level One B-BBEE status.

“As mentioned, one of the key reasons for this particular tender was to bring down IT costs, and eNetworks demonstrated a true willingness to meet this requirement. The company's B-BBEE credentials have also had a positive impact on our procurement needs,” Jogee adds.

“When we responded to the tender bid, key focus points in our submission were to design a highly resilient network by applying best practice principles in the architectural layout of the wide area network,” says eNetworks' senior consultant: WAN and ISP services, Frederik van Staden. “We also needed to remain cognisant of cost savings – without compromising on deploying a quality national network for our client.”

The network design put forward by eNetworks included microwave and fibre connectivity to each site across the national WAN, which is now running at a 99,99 percent uptime, states Ahmed Dawjee, IT infrastructure manager at the business.

“Our needs for different technologies, an improved, more stable infrastructure and greater redundancy – with management via a single point of contact – have all been met by eNetworks. In fact, we have not experienced any downtime since the WAN rollout in March 2018.

“Most importantly, we've not only managed to better utilise bandwidth, but have also saved close to R1 million on links and hosting over the past year.”



Feedback from users has been excellent; our connectivity is much faster, and access to the ERP system has been greatly improved. Essentially, the user experience has changed dramatically.

The automotive firm's widespread national sales, service and parts dealer network includes several retail workshops, situated in Centurion, Bloemfontein, Cape Town, Port Elizabeth, George and Pietermaritzburg, as well as a network of private capital dealers (PCDs) across the country.

According to Dawjee, the business has moved its head office and six company 'owned' sites across South Africa onto the eNetworks WAN. "The impact on our ERP uptime has been extremely positive – previously, should the lines have gone down, we found ourselves unsure as to where to start.

"With this new, highly resilient WAN, we felt confident enough to move our data centre to our head office, and operate all IT systems from there. We are currently in the process of moving our disaster recovery system too."

"Had we not moved the network and cancelled the existing lines, we would never have realised these cost savings," confirms Jogee.

"Feedback from users has been excellent; our connectivity is much faster, and access to the ERP system has been greatly improved. Essentially, the user experience has changed dramatically. Our helpdesk experience with Datacentrix and eNetworks has been exceptional, and the networking team has forged a real partnership with us, always being very proactive and in constant communication," he continues.

"Furthermore, the scope of work being executed by Datacentrix over the past year has changed, increasing to include cloud-based e-mail management, network cabling and more, due to the excellent service levels received."

The automotive company is currently planning to deploy Software-Defined Wide Area Networking (SD-WAN) technology as a service with eNetworks, for additional optimisation and capacity wins, says Van Staden.

"SD-WAN is a logical next-step for our client's new business requirements. The introduction of this type of solution will allow the company to optimise its dual-connectivity by utilising its primary and secondary links at the same time. This fits in well with the organisation's plans to introduce, amongst other services, video over the network lines, with Skype for Business, and also for improved network utilisation," he adds.

**Moosa Jogee, Head of IT at the company and Frederik van Staden, eNetworks Senior Consultant: WAN and ISP Services**



# Unlocking business value from mission critical storage

**Establishing** an effective data storage approach is a challenge that all companies face. The rate of change in terms of volume – along with increased demands for the security of data from customers – means many businesses are struggling to keep pace. It has become essential to adapt to the modern digital age and find new ways to manage infrastructure operations and data storage. Failing to do so leaves them unable to speed up mission critical applications, unlock digital innovation and stay ahead of the competition.

## Not fit for purpose

In the current environment, IT teams within financial services firms, for example, are finding it nearly impossible to keep up with the demands of both new and existing mission critical workloads, for which traditional models of storage are no longer fit for purpose. Confined and consumed with provisioning, troubleshooting and supporting infrastructure, financial IT systems currently sacrifice agility for reliability. Many storage solutions may be fast and reliable but can fall short when it comes to agility and simplicity.

However, in the digital age, where financial organisations across the board are producing and processing ever-growing volumes of sensitive customer and client data, the need to flexibly store large amounts of data and process that data at speed is becoming a make-or-break business decision. So, how do businesses across the financial landscape ensure they can deliver an unmatched performance for mission-critical applications, while preventing downtime and protecting and retaining data?

## Building resilience

Modern data centre requirements mean that mission critical applications and environments demand high availability and resilience. Losing access to data at any point now means a direct impact on a business' time and money. Traditionally, issues with availability arise from systems that sit above the data storage function, such as the network, server and virtualisation.

Nowadays, artificial intelligence (AI) and machine learning (ML) can allow businesses to bypass these barriers, look beyond them, and at the same time predict and prevent any disruptions that might occur in the infrastructure stack. Using AI and ML to predict performance from situations that were once unpredictable is referred to as 'all active architecture', which brings parallelism and multi-node performance and in turn accelerates the use of applications. An added bonus – being able to predict and prevent disruptions – reduces the amount of time that IT teams spend on bog-standard maintenance, freeing up their time to dedicate to more value-add activities.

## Intelligence

The next layer to modern mission critical storage is intelligence. Intelligence changes everything. AI and ML can now be deeply integrated into systems, and trained in the cloud that they are embedded into, to enable an array of real time analytics that support consistent performance for application workloads. Intelligent advanced software protects against silent corruption with end-to-end data integrity, facilitating business continuity with automatic site failover. It also modernises and extends data protection to





Intelligence changes everything. AI and ML can now be deeply integrated into systems, and trained in the cloud that they are embedded into, to enable an array of real time analytics that support consistent performance for application workloads.

the cloud for the most critical applications. So not only does it create business value from the data, it also prevents any potential loss of value that can occur due to failure.

#### **Simplicity**

Traditionally, integrated management set up took days of complex and tedious storage administration, which slowed down and hindered the ability for businesses to serve its customers. However, on top of improving resilience and intelligence, new technology has now taken on much of the heavy lifting, freeing up time for those involved to instead mine the data for value rather than being tied up with avoidable admin. Nowadays, high-end storage software can be set up in minutes, it can streamline workflows and there is just one tool to use.

A technology, like HPE Primera, delivers instant access to data with storage that can be set up in minutes, upgrades transparently, and is distributed as-a-service. Offering an on-demand experience that gives users the agility of the cloud, the product brings radical simplicity to any mission critical apps. Operating with HPE Infosight, the industry's most advanced AI platform for operations, it delivers significant breakthroughs, including reducing time spent deploying, managing and scaling storage by up to 93 percent.

Mission critical storage has been redefined. Businesses should be deploying these new technologies to benefit from the resilience, agility and intelligence that the technology enables. Its technology designed for the intelligence era.



**Stephan Steyn,  
HPE Presales Lead**



# Datacentrix attains ISO certification of its Information Security Management System

**Datacentrix** has been awarded the ISO 27001 certification of its Information Security Management System (ISMS). The certification is a framework of policies and procedures that includes all legal, physical and technical controls involved in an organisation's information risk management processes.

Datacentrix Chief Financial Officer, Elizabeth Naidoo, who was the executive sponsor driving the ISO certification process, says the company is pleased and proud to share this news. The certificate was awarded by international certification body PECB Management Systems, following its audit of Datacentrix' ISMS.

She says, "Datacentrix has attained the PECB Management System Certificate in ISO/IEC 27001:2013. This achievement will certainly inspire customer confidence, in that achieving and maintaining an ISO 27001 certification underscores our assurance that we see the security of their information as a top priority for our business. Further, this is strong evidence of the increasing importance of information security in today's highly interconnected world."

Naidoo notes that there is increasing recognition of the value of having an information security system credential such as the ISO 27001 in place. She adds, "Based on the value proposition that Datacentrix offers, the ISO certification assists in identifying information security issues and addressing them more effectively, both internally and externally. The internal company culture has also benefitted,

with more focus on information security, the identification of assets, and how we treat assets, risks, threats and the vulnerability associated with those assets."

She explains that the ISO certification is important for Datacentrix, as its framework provides many opportunities for improvement by drawing up new sets of controls, and managing these more effectively. "The certification demonstrates that we have done in-depth risk assessment and put systemised controls into place. It increases the reliability and security of systems and information.

"We further believe this will enhance customer and business partner confidence. We view our customers' information as being a top priority, and are happy to be able to provide the independent assurance that we have the necessary controls in place."

"ISO 27001:2013 – the current version of ISO 27001 – provides a set of standardised requirements for an ISMS. The standard adopts a process-based approach for establishing, implementing, operating, monitoring, maintaining and improving your information systems management.

"The benefits of implementing ISO 27001 in your organisation are clear. Primarily, it leads to a stronger business model, longevity, and an excellent information security management system," she concludes.

# Datacentrix wins top Lenovo Data Centre Group award

**Datacentrix** has been named as the Data Centre Group (DCG) Platinum Partner of the Year for 2018/2019 by innovation and technology company, Lenovo. Datacentrix was presented with the award at Lenovo's second annual channel awards for South Africa and the Southern African Development Community (SADC) region, which took place in Johannesburg.

As a tier one Platinum Partner for both DCG and Lenovo's PC Group (PCG), the award was presented to Datacentrix based on its position as the top reseller with this certification – the highest level of Lenovo partner accreditation – from a sales and revenue perspective for the previous financial year.

According to Graeme Dendy, operations and services manager for Converged Solutions at Datacentrix, the company is tremendously pleased to receive this award. "We've put a huge amount of focus on building the highly available and reliable Lenovo brand over this past year, and to receive the top DCG accolade, having not featured in the previous year's award, underlines our efforts.

"We have seen major traction within the hyper-converged solution market, where Lenovo's strategic partnership with

Nutanix has allowed us to provide a solution that allows companies of all sizes to efficiently consolidate and run all virtualised workloads on a single system.

"Moving forward, we see this as being a key solutions set within our hyper-converged stack, and look forward to intensifying our partnership with Lenovo," he adds.

Jim Holland, Country General Manager, South Africa and SADC, continues: "The main criteria for Datacentrix' award were total revenue contributions in the region, where our partner had carried out some very big deals, as well as percentage of growth year-on-year. We also based the award on the level of investment in skills in the company, and building the level of relevance in the organisation.

"Datacentrix is a tier one partner and, as such, plays a critical role in our go-to-market strategy. The Lenovo DCG grouping is relatively new in South Africa, but Datacentrix has built its competence quickly, while also adopting our customer-positioned strategy and translating it for local clients. In terms of Datacentrix' technology and skills, from our perspective we see a strong partnership going forward, with a close collaboration between our two organisations." Holland concludes.



**Jim Holland, Regional Director: Lenovo DCG, Southern Africa; Shawn Marx, Business Unit Manager, Datacentrix; Graeme Dendy, Operations and Services Manager: Converged Solutions, Datacentrix; Suveer Rambaran, Lenovo Product Specialist, Datacentrix; Michele Groenewald, Lenovo Data Centre Partner Account Manager; Conrad Dellar, Pre-sales Specialist, Datacentrix; and Steven Boucher, Pre-sales Specialist, Datacentrix**

# Datacentrix maintains Level One empowerment rating

**Datacentrix** has maintained its Level One Broad-based Black Economic Empowerment (B-BBEE) rating on the new ICT B-BBEE Codes. Datacentrix Chief Financial Officer, Elizabeth Naidoo, says the rating is a team effort across the business.

“Datacentrix has held a Level One rating for three consecutive years,” she clarifies, “and this year, the rating is maintained in terms of the new code levels. Sustaining our empowerment rating is a priority on management's agenda – it is an integral part of our business culture and strategy, and one of Datacentrix' fundamental objectives.

“In the current economic climate, as well as in support of the country as a whole, it's important to truly be part of the transformation process, and not simply to follow a tick-box exercise. We are proud of the way we have aligned our strategy with the B-BBEE codes.”

Naidoo notes that Datacentrix began its transformation journey 21 years ago, nine years before the codes were first introduced. She notes, “The company's culture has definitely changed with the transformation of the country, and executive management has elevated empowerment to a strategic level in the business.

“Employment equity is fundamental to the company culture, and in this regard, recruitment plays a crucial role in maintaining our empowerment level. Additionally, from a learnership perspective, we have accommodated around 700 learners over the past eight years.

Datacentrix operates according to stringent procurement policies that support and encourage the supply from SMMEs and smaller businesses, helping them to grow in context of the greater economic climate.”

Some of the highlights of the maintained rating include:

- Black ownership of 51.42 percent;
- Black woman ownership of 47.09 percent; and
- 135 percent procurement recognition.

Naidoo adds: “All Datacentrix' business managers contribute towards employment equity, keeping this at the forefront of their recruitment processes. Further, human resources manages skills development and corporate social investment across the business, while all of management ensures that procurement is channelled through the right vendors, who add value to our B-BBEE credentials. From our clients' perspective, it is positive for them to see that we are interested in partnering with companies that have prioritised transformation.”

Naidoo notes that the maintenance of the Level One rating plays an important role in the company's growth. “We find that some of our clients look quite closely at the different elements of the score card, with management control, procurement and ownership being especially important.

From a strategic perspective, it is nearly impossible to grow a business if you are not accredited at the highest level, as clients only want to deal with the most empowered companies,” she concludes.

# OpenText recognises Datacentrix with OpenText Partner of the Year Award 2019 for Africa

**Datacentrix** has recently won the 2019 OpenText Africa Partner of the Year Award for the second consecutive year, presented at the OpenText Digirruption Indaba in Johannesburg. Local Datacentrix client, SANParks, was also acknowledged as 'Visionary of the Year'.

The OpenText Partner of the Year Awards recognise the technology vendors, resellers, and systems integrators who have developed and delivered exceptional OpenText-based solutions during the past year. Datacentrix was honoured among a select group of global partners for implementing solutions that delivered exceptional customer value and supported the digital transformation of intelligent and connected enterprises worldwide.

“Datacentrix has enjoyed a long-standing partnership with OpenText, spanning almost 20 years, and we continue to work closely with this visionary company assisting businesses in their digital transformation journeys as its only Platinum Partner in Africa,” explained Juane Peacock, Managing Director: Coastal and Digital Business Solutions at Datacentrix.

“As such, we have been recognised by the enterprise information management (EIM) company a number of times over this period, named as 'Fast Growth Market Partner of the Year' across Latin America, CIS/ CEE (Russia and Eastern Europe), the Middle East, Africa, India, China and Japan in 2015, as well as receiving the 'SAP Solution Enhancement of the Year' award for our work in transforming business operations at local clients, in 2017.

“Our close partnership with OpenText is reinforced once again through this most recent recognition as Partner of the Year in Africa, and we look forward to seeing where our journey together takes us into the digital economy of the future. It is always encouraging to see the success of our customers and appreciation of their achievements within the EIM space, and this has continued into 2019, with SANParks' recognition for its digital transformation process as another crowning moment for the event,” he added.



**Chris Ditchburn, Senior Director, Engineering at OpenText and Juane Peacock, Managing Director: Coastal and Digital Business Solutions at Datacentrix**

“As a world leader in EIM, OpenText is committed to providing our customers with a sustainable information advantage that drives productivity and growth,” said Julie Tregurtha, regional vice president of sales for Africa, OpenText. “OpenText’s partners are critical for enhancing our customers’ experience and we are pleased to acknowledge the insight, expertise and service that they bring to the market.”



# Datacentrix tackles smart mining at first Mining Indaba event

**Datacentrix** held its first Mining Indaba event at Zebula Lodge in Limpopo, demonstrating to 90 industry attendees how transformative technologies are supporting smart mining operations. Sponsored by Huawei (Platinum) and Veritas (Gold), the event provided a platform for the South African mining sector to engage in discussion about the industry's digital journey progress and challenges, explains Johann Coetzee, Managing Director: Commercial and Technology at Datacentrix.

"Datacentrix and its partners put together an agenda designed to provide advice to local mining organisations wanting to embrace digital transformation, looking at topics including the hybrid multi-cloud, digitally connected mines, IT security challenges within industrial environments, video surveillance and artificial intelligence (AI), intelligent data management within the mining environment, and more.

"The overriding theme of the event was that the mining industry must take advantage of the serious benefits offered through digitalisation, automation and the more intelligent use of data. By embracing fourth industrial revolution (4IR) technology, mining organisations can optimise their environments, allowing them to take advantage of greater predictability around equipment and a more efficient labour force."

Key take-away points from the conference included the fact that the mining industry has, so far, missed the transition to

the digital age and how these organisations can leapfrog themselves ahead, why cloud migrations fail and how to approach a successful cloud journey, solving challenges around the merging of operational technology (OT) and IT, and using machine learning for greater predictability around equipment failures to boost longevity.

Keynote speaker Brian Armstrong, South Africa's pre-eminent thought leader on digitalisation and business strategy and the Professor of Digital Business at the Wits Business School, highlighted these points in his presentation, stating that globally – across all sectors – companies that have gone the digital route are showing better performance than those that have not yet transformed. "We are seeing waves of technological change, and have done so since before 1900. Today, however, these waves have increased and intensified, and the impact is further reaching. With the tech revolution comes a different way of doing business and a transformation in society, and the converging point is the 4IR; this is where the 'magic' happens."

While the local mining, manufacturing, oil and gas, forestry and fishing industries are at lower risk of disruption than the media, ICT, legal services, healthcare, education, financial services and retail, there have been major changes in the type of organisations represented within the top 10 companies by market capital. "The oil barons have been replaced by the whiz kids of Silicon Valley," Armstrong



By embracing fourth industrial revolution (4IR) technology, mining organisations can optimise their environments, allowing them to take advantage of greater predictability around equipment and a more efficient labour force.

**Keynote speaker Brian Armstrong,  
Professor of Digital Business at the  
Wits Business School**



explained. “Seven out of 10 of today’s top organisations are platform-based businesses. We’re seeing company mortality rates rising, with the average company lifetime shrinking to 15 years, and at this rate, 50 percent of listed companies in 2019 will be gone by 2029.

“Zooming in on automation, the reasons for it are clear,” he said. “As humans, we are subjective. We are costly to scale. We make mistakes. We are temperamental and slow. Machines are more predictable – they are not affected by external factors. They are easier and quicker to scale. They remove the errors from the system. And they are faster at many things than humans – taking around four seconds to perform an IT risk audit, for example, as opposed to the four weeks that it can take humans.

“To make the transition into 4IR, we need to gain new skills, fostering an attitude of continuous learning, and equip ourselves with more relevant skills – moving away from admin-heavy roles, like clerks and secretaries, towards analysts, managers and specialists. This willingness to learn new things, and a recognition that our existing skills are becoming obsolete, will provide a winning approach for the future.”

For more information on the Mining Indaba, Datacentrix’ end-to-end solution offering, and to download speakers’ presentations, please visit <https://www.datacentrix.co.za/miningindaba2019.html>.



# Datacentrix takes highest honours at Mimecast awards

**Datacentrix** secured two accolades at the 2019 Mimecast Partner Awards, including the prestigious 'Top Performing Partner of the Year' award. The awards event took place at the trendy Rosebank restaurant, Marble.

According to Wayne Olsen, security business unit manager at Datacentrix, despite being a major discussion topic within the industry, realistically, many local companies are afraid to make the move to the cloud. "At the same time, with 93 percent of malware delivered into organisations via e-mail, local companies now have a heightened awareness of e-mail security and management. Mimecast's e-mail security, service continuity and archiving offering represents the first stepping stone into the cloud for a number of our clients.

"The proprietary cloud architecture allows Datacentrix to detect and stop e-mail-based attacks in the cloud, before they even reach the client," Olsen continues.

He explains that Datacentrix has placed a strong focus on growing the local Mimecast market share since becoming a partner three years ago, seeing a massive upturn in Mimecast business over the past two years in particular. "Our emphasis on Mimecast played out with Datacentrix being named as the 'Most Improved Partner' last year, and now again for the second time.

"Our crowning achievement, however, has been this year's 'Top Performing Partner' award. We are thrilled to announce that Datacentrix achieved Mimecast's largest deal globally in 2018, a major contributing factor to our 400 percent growth in new business over the past year."



We are thrilled to announce that Datacentrix achieved Mimecast's largest deal globally in 2018, a major contributing factor to our 400 percent growth in new business over the past year.

Says Haley Higgs, channel marketing manager at Mimecast: "Datacentrix winning the title of Top Performing Partner was a noteworthy achievement for the organisation; they have really shot the lights out over the past year," she explains. "Our awards are open to all local partners, and as our top performer, Datacentrix' combined new business and upsell business surpassed the value of our other entrants for the year. For the Most Improved award, we compared the company's combined new business and upsell business with the previous year's performance, and Datacentrix came out on top here too.

"Datacentrix understands the value Mimecast solutions can bring to local businesses, and the company's insight into its clients has been invaluable," she adds.



# Datacentrix intensifies focus on RPA space with appointment as local UiPath partner

**Datacentrix** has extended its digital business solutions offering to include AI-powered robotic process automation (RPA) technology. Recently appointed as a local Business Partner for UiPath, a leading AI and RPA software company, Datacentrix is able to help clients to further empower employees, boosting productivity, efficiencies and business value – through automation.

Its position as a UiPath Business Partner will allow Datacentrix to resell and implement UiPath solutions to automate millions of tasks for business and government organisations across the globe, delivering a positive effect on both customer experience (CX) and employee job satisfaction.

“UiPath’s technology is an excellent fit for Datacentrix’ existing digital business solutions expertise,” explains Lenore Kerrigan, UiPath country sales director. “We’re on a growth trajectory both internationally and within South Africa, as organisations look to reap the benefits of automation. This local expansion drive has seen UiPath appoint partners that we believe will help us to add value. Knowing the Datacentrix team well, we were pleased to engage with the company as a South African Business Partner to assist us in building local sales.

“The South African contact centre market is merely the tip of the iceberg when it comes to RPA adoption,” she says. “We’re seeing increasing demand across all industries, from retail and healthcare, to manufacturing and even public sector – with the most progressive currently being financial services. Interestingly, RPA implementations are being driven as a business decision, thanks in part to how quickly the technology can be rolled out and add value. As opposed to traditional transactional solution projects, which could take years to implement, RPA processes can be up-and-running within weeks.”

Kerrigan explains that RPA technology is particularly important in four specific areas: acceleration of digital transformation; customer experience; employee experience; and governance and compliance. “It has a hugely positive impact on customer and employee experience alike, with previously painful onboarding processes (both internal and

external to the company) cut down from more than a week to minutes. It also takes human error completely out of the equation – a bot does exactly what it is told to do consistently and correctly every time – assisting businesses to better manage governance, risk and compliance controls. Finally, the benefits of increased accuracy and throughput offered by automation and RPA can assist in lowering business costs and increasing revenue.”

And once an organisation has a handle on how to use RPA within traditional processes, it is able to look at potentially new realms of possibility that may not have been previously considered, she adds. “Businesses using RPA automation can operate more strategically, and in a more targeted way. This type of technology opens up new worlds that are physically impossible to access using manpower alone, while at the same time freeing the workforce from mundane, routine activities.

“We’ve reached a tipping point when it comes to employees’ capacity; one where more overtime and more stress is just not the answer,” Kerrigan continues. “It’s now time to encourage our employees to embrace creativity, empathy and innovation, essentially removing the ‘robot’ from the human. There’s proof now that digitally native companies have an edge over brick-and-mortar businesses, and it is becoming more pressing to change your mindset to stay ahead.”

Says Shakeel Jhazbhay, general manager of Datacentrix’ Digital Business Solutions division: “As a partner that is focused on helping South African organisations to enable digitalisation success, the expansion of our offering to include RPA, as a framework to automate business processes and build a digital workforce, was a logical move.

“We believe that UiPath’s positioning as a progressive solution provider, as attested to by Gartner where it placed UiPath as a Leader in its 2019 ‘Magic Quadrant for Robotic Process Automation Software’ report, and its proven ability to help businesses to accelerate digital transformation and growth, as well as to create capacity, made our partnership decision an easy one.”

# Digital transformation: it's more than just a technology decision

**While** technology is certainly one of the important decisions that must be made by a company embarking on a digital journey, it does not represent the starting point of such a transformation. So said Bill Hoggarth, national sales manager, Digital Business Solutions at Datacentrix, speaking at the Business Intelligence and Analytics conference at Sandton Convention Centre. Hoggarth explained that the first step must be to identify the big opportunity, big idea or big problem within the organisation – before the big data – and then weave the threads together with these end-goal objectives in mind.

“From a business perspective, the answer often lies in the data, but why you need the data in the first place is what needs to be identified upfront. You have to start with the end in mind and work backwards; imagining how future data sets will drive real organisational change.”

Hoggarth cited the example of Crossrail, a new railway in London, which will be a high frequency, high capacity service linking 41 stations over 100 kilometres underground through central London from the east and west. It will give 1.5 million additional people access to central London within 45 minutes, reduce journey times and create new journey opportunities.

“And, while it is not only one of the most ambitious transport schemes in London and the world for the past 50 years, as well as being the largest construction project in Europe, the £20 billion project came to an abrupt halt,” he said, clarifying that a major delay faced by the organisation was that it could not get insurance during the underground drilling process.

“Crossrail’s solution to this problem was to install a network of 250,000 geo sensors, which would provide data on the smallest shift within the ground and send the relevant warnings to stop construction. Only with this network in place could they get the necessary insurance in place to move forward.

“Without meeting this specific business need and using technology to track the relevant data, the project was a non-starter.”



**Bill Hoggarth,**  
**National Sales**  
**Manager: Digital**  
**Business Solutions**  
**at Datacentrix**



What Crossrail managed to achieve with its geo sensors, he added, was to identify a challenge or need and see how technology, and the data gathered via these solutions, could help to achieve this objective.

“We want data to become a proactive source of competitive advantage, driven across the entire organisation. Digital transformation goes hand-in-hand with business strategy – it is impossible to transform or change behaviour without being aligned to business strategy,” he added.



You have to start with the end in mind and work backwards; imagining how future data sets will drive real organisational change.

“Taking this type of approach will also help free up employees for more creative decision making. A South African cinema company provides an excellent example of this sentiment locally, with the automation of the ticket and snack purchasing process at its theatres. Although employees are no longer needed to physically sell tickets to cinema-goers, the movie exhibitor actually employs more people now than previously. The difference is that, instead of performing rote, mundane booking duties, employees are freed up to perform a more valuable, creative job function. In fact, this heightened focus on the customer’s experience, and how employees can enrich this, has seen the average revenue per person per visit more than triple.

“We’re entering a brave new world, where data is captured by IOT devices, leveraged by AI, consumed by bots, and managed on the blockchain, and this glimpse into the future of data should be applicable for at least the next 20 years. Organisations that take this business-focused view, and look beyond the technology itself, focusing on the way in which they engage with it, will stand the test of time,” Hoggarth concluded.

## Datacentrix and HPE Aruba host experience-driven networking event

**Datacentrix** and HPE Aruba hosted a well-attended event at Langhams Executive Conferencing in Johannesburg. Local and international experts discussed smarter solutions for experience-driven networking, specifically for the Healthcare, Education, Hospitality and Manufacturing industries. The event comprised two separate sessions, including an exclusive CIO breakfast and open plenary and panel discussion.



# NBC experiences 120 percent ROI within four months, following rollout of highly available SD-WAN with eNetworks



Frederik van Staden, eNetworks' Senior Consultant: WAN and ISP Services; Tyrone Lutchmanen, Divisional Head: ICT Infrastructure at NBC and Sanjay Rabeenunū, Senior Account Manager at Datacentrix

**NBC Holdings**, the first black-owned and managed employee benefits company in South Africa, has seen a 60 percent saving on connectivity costs – with double the amount of connectivity links – since moving and upgrading its national wide area network (WAN) with Datacentrix company, eNetworks, the Group's internet service provider and network specialist business.

The new software-defined networking (SD-WAN) project has also resulted in a 120 percent return on investment for NBC, within just 16 weeks. Its scope incorporated the installation of a new nation-wide, highly redundant WAN, including SD-WAN devices, microwave and fibre connectivity links, a local area network (LAN), access layer switches, security and more.

Tyrone Lutchmanen, NBC's divisional head of ICT infrastructure, explains that he joined NBC at a time when the company was about to relocate its head office from Braamfontein to Parktown and needed to facilitate the move of its data centre within a short space of time. "We had a two-month period within which to move the NBC data centre from Braamfontein to the new building in Parktown while, at the same time, replacing ageing infrastructure. This meant that taking a 'big bang' approach was the only way to meet these deadlines.

"Having worked with Datacentrix previously over several years and experienced the company's proven track record first-hand, it was a natural step to bring the Group's ISP eNetworks team on board at NBC to assist us in rolling out the wide area network."

Despite the tight timeframes, eNetworks worked closely with NBC to ensure that the new highly available, redundant, enterprise-grade connectivity was implemented on schedule, and with no unexpected downtime.

"The Datacentrix eNetworks team has been brilliant," says Lutchmanen. "Our experience with them has been

# Datacentrix joins SolarWinds partner network

consistently great; they are quick to respond, and promised services are always delivered.

“Since the rollout earlier this year, we’ve already seen huge benefits. As a financial services company, NBC cannot compromise on uptime, and since the implementation of this highly available, fully redundant solution, we have not experienced any downtime since the move.

“Our bandwidth gains for both head office and our 10 other sites nationwide have led to a network performance improvement of around 300 percent, while also future-proofing the business,” he adds. “In addition, the bandwidth increase has allowed NBC to centralise its data, helping to lower business risk, simplify maintenance, and bring down the total cost of ownership.”

A number of business units across Datacentrix worked together to ensure that NBC’s strict time frames were adhered to, aligning all elements of this project, says eNetworks’ senior consultant: WAN and ISP services, Frederik van Staden. “Together as a unified team, we were able to move NBC forward from a legacy wide area network to one that is fully redundant. While previously the organisation’s biggest link was 6mbps, the entire business now runs on a total WAN capacity of 860mbps – and still at a 60 percent cost saving.”

Looking ahead, aside from its operations within all major centres in South Africa, NBC is swiftly expanding its African footprint. The organisation currently has an additional 10 sites outside South African borders, including Ghana, Lesotho, Swaziland, and Mozambique, and is looking at further growth within the continent, according to Lutchmanen.

“Unfortunately connectivity up into Africa is challenging, and addressing this point is key as the next step in our roadmap,” he states. “As a trusted supplier with an existing offering within Africa, NBC will look to eNetworks as a strategic partner beyond South Africa.”

**Datacentrix** is proud to announce its partnership with SolarWinds, a leading provider of powerful and affordable IT management software. SolarWinds® serves over 300,000 customers worldwide ranging from small businesses to large enterprises. The two companies recently joined forces to demonstrate SolarWinds’ IT management portfolio at a client event held in Johannesburg.

“The multi-vendor monitoring solutions for on-premises, cloud, or hybrid deployments are a good strategic fit for Datacentrix,” said Johann Coetzee, Managing Director: Commercial and Technology at Datacentrix.

“Fully scalable SolarWinds solutions help to reduce costs, speed up problem resolutions, and track issues quickly, putting the client in control of their systems and applications performance. The solutions are designed to help IT professionals successfully manage and easily scale their IT environment regardless of size or complexity. A free trial version of the solutions is available to download for clients to experience the performance power and value delivery with zero commitment.”

Datacentrix has successfully completed its first SolarWinds implementation with a large African beverages company across its African operations and is looking forward to expanding the operational performance benefits to its client base.



# Aruba delivers industry's first end-to-end, services-rich switching portfolio spanning enterprise campus, branch and data centre

## New CX series switches with cloud-native operating system integrate closed-loop automation and analytics to simplify the operator experience.

**Aruba**, a Hewlett Packard Enterprise company, recently announced that it is changing the rules of networking with the introduction of switching and software innovations designed to address the unique needs of today's modern enterprise campus, branch and data centre. The Aruba CX Switching Portfolio now includes the Aruba CX 6300 Series fixed configuration and CX 6400 Series modular access, aggregation and core switches, while delivering the latest advancements in the AOS-CX operating system. This gives network operators one simple, end-to-end switching platform to dramatically improve business outcomes today and into the future.

Aruba is the first company to offer a single switching platform that runs on a modern network operating system – AOS-CX – from the enterprise edge to the core to the data centre. This unique, cloud-native platform is further

optimised by Aruba's powerful Network Analytics Engine (NAE), which utilises embedded analytics and automation to simplify management, accelerate troubleshooting of application performance issues and remediate common network problems.

"AI-powered automation must be at the heart of a modern, edge-to-cloud architecture and, to be truly useful, it requires an intelligent infrastructure as the foundation," said Keerti Melkote, president and founder at Aruba. "We believe that AI is the key to analysing data, providing actionable insights, and automation at scale to optimise network operators' ability to quickly troubleshoot, remediate and proactively resolve some of IT's most pressing challenges. Our vision for the future is a cloud-native architecture that delivers true business agility and new digital experiences, and today's introduction is an important step in that direction."

Today's enterprises cannot remain competitive by relying on greater performance and increased bandwidth alone. The modern enterprise requires an advanced architecture that is self-validating and self-tuning through closed-loop automation to intelligently support mission-critical applications, circumvent new security attack vectors, and deliver the agility that today's enterprises require. Until now, network operators have had to contend with inflexible,



a Hewlett Packard  
Enterprise company

disparate architectures especially when managing branch offices, enterprise campuses and data centres. These architectures require manual processes across multiple operating systems, resulting in fragmented operating models, networks incapable of modern functions and a plethora of unstructured data that isn't actionable.

Gartner states, "As update speed increases, it is no longer viable to manually plan for and deploy tens, hundreds or thousands of network changes each time an application change occurs. Making these changes manually is not only impractical, but is likely to result in significant errors."

Manual processes can significantly hinder an organisation's ability to move quickly, innovate and thrive in a competitive marketplace. Moreover, many of these hurdles can be overcome with a cloud-native infrastructure. According to Gartner, a "cloud-native infrastructure exhibits the following characteristics:

- **Modularity** – It provides abstractions for independent packaging of services (such as containers or serverless functions).
- **Programmability** – It supports provisioning and management via declarative application programming interfaces (APIs) and policies.
- **Elasticity** – Resources can be scaled up and down dynamically in an automated and policy-driven manner using orchestrators.
- **Resiliency** – Services are loosely coupled units that are independent and fault-tolerant."

Modern enterprises need an edge-to-cloud network running on a common platform to benefit from automation and increased operational efficiency, freeing up network operators to focus on business-critical activities.

### One OS. One ASIC architecture. One operating model.

Stemming from the breakthrough innovation and success of its CX 8400 Series core switches running the AOS-CX operating system – as evidenced by significant momentum

with winning new core customers – Aruba is addressing these challenges with a modern switching portfolio that delivers a single operating model from the enterprise campus and branch access layer to the data centre, greatly simplifying network operations. The new platforms in the Aruba CX Switching Portfolio incorporate the key elements of a modern networking infrastructure and include:

- **Aruba CX 6300 and CX 6400 Series switches featuring Aruba's 7<sup>th</sup> Generation ASIC architecture:** The Aruba CX 6300 Series is a family of stackable switches that offers flexible growth via a 10-member virtual switching framework (VSF) and provides built-in 10/25/50 gigabit uplinks to meet the bandwidth needs of today and the future. The Aruba CX 6400 Series modular switches offer both a 5-slot chassis and a 10-slot chassis with a non-blocking fabric that scales from Gigabit POE access to 100G core, allowing customers to standardise on one platform across the enterprise, including hybrid use cases.
- **AOS-CX 10.4:** The new version of AOS-CX introduces rich access features to the OS while extending CX differentiators to the access layer of the network. These include Aruba Dynamic Segmentation to provide secure, unified policy across wired and wireless down to every user and IoT device, Ethernet VPN (EVPN) over VxLAN for simplified and secure connectivity from enterprises to data centres, and Virtual Switching Extension (VSX) live upgrades for no downtime during maintenance cycles.
- **Aruba NetEdit 2.0 with Network Analytics Engine (NAE):** The significantly enhanced version of Aruba's NetEdit software now integrates with Aruba's NAE. This advancement enables centralised visualisation of network health leveraging NAE distributed analytics across every switch in the network to reduce troubleshooting cycles from days to minutes. New automation capabilities simplify common tasks such as implementing configuration changes or initial system set-up, which can now be completed via the CX Mobile app.



# The what, how and why of AI



By Shakeel Jhazbhay, General Manager: Digital Business Solutions at Datacentrix

**Data** plays a pivotal role in any artificial intelligence (AI) implementation. In fact, data is often the most under-used asset a company has, and a 'data-first' approach forms the very foundation of AI.

This is according to Shakeel Jhazbhay, general manager: Digital Business Solutions at Datacentrix, who explains that a Narrative Science survey confirms his claim.

"The survey results state that 61 percent of companies with an innovation strategy say they are using AI to identify opportunities in data that would otherwise be missed, while only 22 percent of those without such a strategy could make this claim," he says.

"Clearly then, it is critical that local companies have the right data strategies in place – as well as a clearly defined implementation and adoption plan – to ensure a successful AI journey."

### What AI is ... and what it is not

Jhazbhay explains that AI can be defined as the ability of machines to mimic human-like intelligence: to learn, adapt, reason, problem solve, self-correct among many other actions. "What AI is not is a living entity with real perception of emotions, sensory awareness and high cognitive intelligence that exists on its own, without any form of human intervention.

"There's no doubt that AI has a critical job to perform within today's society, and there is a growing awareness

from consumers as to where it is used on an everyday basis," he adds. "We're seeing the proliferation of chatbots, for instance, as well as a growing use of image, video and speech recognition."

Gartner has predicted that by as soon as next year the average person will speak more frequently to a bot than to their spouse. In keeping with this sentiment, Salesforce research from earlier this year states that the projected growth rate of the use of chatbots within service organisations is targeted at 136 percent.

From a consumer point of view, a study by Creative Strategies uncovered that 97 percent of mobile users are already using AI-powered voice assistants, with 51 percent of mobile phone owners using voice assistants while driving specifically. Also marketing company, WordStream, says 40 percent of adults use voice search functions at least once every day.

"AI has become commonplace within our everyday lives, transforming the way we do many things," Jhazbhay says.

### Why go AI?

Businesses that successfully leverage AI in solution delivery to customers stand to gain a reduction in operational costs, increases in productivity, operational efficiencies and revenue, and improved customer experience. AI also eliminates human error, as computers are better suited to handling the repetitive tasks that humans don't like to perform.





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Applicable across any number of market verticals, common business cases for AI include:

**Banking and finance:** AI is being used to detect and prevent fraud, client retention, wealth management, and provide personalised recommendations;

**Insurance:** AI is being leveraged to generate new sales leads, risk analysis for new applications, behavioural policy pricing, claim validation and settlement; and

**Agriculture:** AI is being used to help farmers predict crop yields, which is vital in water restricted areas like South Africa.

Jhazbhay recommends that organisations looking to implement an AI solution should ensure proper planning is done beforehand, taking the following practical steps:

1. Determine the quality of an AI product by looking at past success rates and analysing previous case studies of the AI application in question;
2. Once your business has decided on which route to take, a clearly defined use case must be put together;
3. Then, data sources and availability must be verified;
4. Basic data exploration and analysis must be completed;
5. A model building and validation methodology needs to be defined;
6. The model must be built and deployed; and
7. It must then be continuously updated.

AI plays an important role in allowing businesses today to get to grips with, and derive meaning from, an ever-growing volume of data from various sources, Jhazbhay explains. “Organisations are using AI to get the most out of this information through deeper analysis, discovery and progressive learning – a task easily overwhelming to humans,” he says.

“However, AI is intended to enhance human capabilities and contributions by performing such mundane tasks in an efficient, reliable and predictable way, thereby freeing the humans to focus on more complex tasks.

“The good news is that AI should also create more jobs than are displaced, with the World Economic Forum (WEF) forecasting that AI could create 58 million new jobs within the next few years, with a large shift in job quality, location and permanency expected,” he concludes.

**Shakeel Jhazbhay,**  
**General Manager:**  
**Digital Business**  
**Solutions at**  
**Datacentrix**



**PARTNER**

# The true cost of cybercrime to business

By Corien Vermaak,  
Cyber Security Specialist at  
Cisco Systems (South Africa)

In 2019, it was reported that cybercrime breaches were up 11 percent year-on-year, and had increased by over 67 percent over the past five years, according to Accenture's global Ninth Annual Cost of Cybercrime Study.

Some countries are seeing alarmingly high increases in numbers, with the US, Germany and China leading the cost of cybercrime list. According to the South African Banking Risk Information Centre (SABRIC), South Africa is also at greater risk, seeing an increase of over 100 percent in mobile banking application fraud alone.

According to the Australian government's 'Stay Smart Online' initiative, 50 percent of incidents can be blamed on web-based and insider attacks. This concurs with the annual IBM X-Force Threat Intelligence Index 2018, which concludes that 'inadvertent insiders' accounted for two-thirds of all the records that were compromised. Our

workforce is also one of the largest contributors to damages suffered during attacks, as the loss of productivity is mostly understated. According to the Cisco CISO Benchmark Report, user awareness is a critical focus for Chief Information Security Officers (CISOs) globally.

A ransomware attack takes place every 14 seconds, and it's estimated that this will increase to a rate of every 11 seconds in the next two years. And the largest target sector? According to three different reports, it's the small business. The Australian government states that 60 percent of targeted attacks strike small and medium businesses. On average across all the research, more than 50 percent of attacks are focused on the smaller business.

Looking at the the enterprise level, however, it is clear that the financial sector is mostly affected. According to a Ponemon Institute report published by Accenture, the financial sector suffers the greatest losses per breach in terms of costs.

If we look at the actual cost per breach, the jury is still out on this discussion. However, the industry is in a position to roughly quantify what these breaches are costing organisations.

Considering figures reported by SABRIC, the South African financial sector places the costs at \$1,2 million per breach. The Australian government reports that, according to reported cybercrime research, an attack amounts to in excess of \$270,000. Germany is reported to be within the





It's safe to say that the cost of a breach is increasing as you read this, and the likelihood of compromise is following suit. As the world takes data privacy more seriously, we see escalating fines by data privacy regulators globally. The rhetorical question then is, does this cost risk warrant a spend of between four and nine percent of IT budget only?



**Corien Vermaak, Cyber Security Specialist at Cisco Systems (South Africa)**

top three in terms of what cybercrime is costing countries as a whole, with \$50 billion in losses.

These numbers are thought-provoking, but let's simplify the matter of cost further. Based on several reports, one of the most prevalent attack vectors is web-based compromise, and all of the reports and research teams make a noble attempt to quantify some of these breached in a statistically relevant way.

It is reported that the cost per web-based breach varies between \$53,000 up to \$114,000, equating to an average of \$83,000. If you take into consideration that 60 percent of attacks are focused on the SME sector, this figure is alarming, begging the question of whether a small or medium business can survive an attack at that cost?

On the issue of how much attacks can set us back, it would be irresponsible not to mention the added risk of regulatory fines. Even though all the reports mentioned how the cost per attack is calculated – including business interruption, information loss, revenue loss and equipment damage, among other factors – most attacks target data. If a company is found to have not done what is reasonably expected to protect its data, these attacks could also be subject to fines by data privacy regulators.

Taking this this one step further, as in the case of Equifax, the cost of a breach could be affected by civil procedure or corrective actions required to assist affected data subjects.

For instance, consider the record British Airways fine of \$230 million. In 2019, British Airways was fined by the UK's data protection authority, the Information Commissioner's Office (ICO), for a breach that harvested personal and payment data. Circling back to Equifax, the organisation was fined only £500,000 (\$625,000) in the UK for its 2017 breach, which was the maximum fine allowed under the pre-GDPR Data Protection Act. This figure, however, now stands at over \$700 million, if you add the settlement with the Federal Trade Commission, the Consumer Financial Protection Bureau (CFPB), and all 50 US states that claimed damages against Equifax.

It's safe to say that the cost of a breach is increasing as you read this, and the likelihood of compromise is following suit. As the world takes data privacy more seriously, we see escalating fines by data privacy regulators globally. The rhetorical question then is, does this cost risk warrant a spend of between four and nine percent of IT budget only?

“Clearly, South Africa's financial industry has not escaped unscathed, with SABRIC announcing at the end of October that local banks are under sustained distributed denial-of-service (DDoS) attacks,” adds Hardus Dippenaar, senior network architect within Datacentrix' Cisco business unit.

“And with our SMEs also being increasingly targeted by cybercriminals, businesses of all sizes must take a holistic approach to cyber security, looking not only at securing the environment, but also securing context, person, content and access.”

# Innovation cloud platforms accelerating growth: myth or opportunity?

By Rudie Raath, Chief Digital Officer:  
Technology Innovation and Advisory  
at Datacentrix



**While hybrid multicloud adoption is definitely a driving force, fuelled by benefits like reduced costs, enhanced accessibility and scalability, leveraging the cloud takes careful planning.**

**Research** and advisory company, Gartner, predicts that integrated infrastructure-as-a-service (IaaS) and platform-as-a-service (PaaS) offerings are driving the next wave of cloud infrastructure adoption. It states that by 2022, 90 percent of companies will purchase cloud technology from an integrated provider.

Speaking at the Mining Indaba, organised by Datacentrix and held at Zebula Lodge in Limpopo, Chief Digital Officer: Technology Innovation and Advisory at Datacentrix, Rudie Raath, explained to the 90 mining delegates in attendance that there are a number of contributing factors to this growth.

"These figures are fuelled by the benefits of reduced costs, enhanced accessibility (focused on anywhere access for the workforce of tomorrow), secured data, effective collaboration and scalability," he said.

"Hybrid multicloud adoption is a driving force for 2019, as are other growing cloud trends, including backup and disaster recovery, serverless computing, data containers, cloud security and artificial intelligence (AI) platforms."

However, despite all of the perceived benefits that cloud can deliver, why are enterprises finding it to be a slow and costly process? Raath explained that there could be a number of potential stumbling blocks when it comes to going the cloud route.

"Cloud service latency can be an issue, and connectivity can also be challenging, particularly when it comes to the potential disruption of cloud services and increased data accessibility risks. In addition, some companies struggle with deciding what to keep on-premises and what to move to a third-party public cloud supplier, and then how to successfully run a hybrid cloud environment, with all of its added complexities."

A Teradata survey on the state of analytics in the cloud found that many companies, particularly those running hybrid cloud environments, have found it challenging to integrate their public cloud and on-premises tools and applications, with 30 percent of respondents reporting that they had experienced difficulties in connecting legacy systems with cloud applications.



These results emphasise that realising the benefits of cloud takes careful planning. This should start with understanding and documenting why you are considering the adoption of cloud technology, and educating yourself by reading case studies based on similar organisations.

In this vein, a Dimensional Research study affirmed that 62 percent of respondents found their cloud migration projects to be more problematical than expected. Those surveyed also said that they should have performed more pre-migration testing (56 percent), set a longer project timeline (50 percent), hired an in-house expert (45 percent) and increased their budgets (42 percent).

“These issues aside, there is a general consensus that the downside of cloud technology is heavily outweighed by the benefits to be had.”

Raath then offered practical advice to organisations wanting to make the move to the cloud.

“These research results emphasise that realising the benefits of cloud takes careful planning,” he said. “This should start with understanding and documenting why you are considering the adoption of cloud technology, and educating yourself by reading case studies based on similar organisations.

“Next, your current platform performance must be assessed, thus creating an infrastructure baseline, and a full data integrity check performed. This information can then be stored in a configuration management database (CMDB), providing a clear means of understanding your company’s critical assets, how they relate to one another, and which workloads are better suited for the cloud.”

The subsequent step is to connect to the cloud architecture in a secure, redundant and tested environment, before going ahead with workload migrations and a final cut over, Raath explained.

“As a cloud solution provider, Datacentrix is able to help its clients to get to grips with how cloud can be applied to their



**Rudie Raath, Chief Digital Officer; Technology Innovation and Advisory at Datacentrix**

unique environment. There is no ‘rinse and repeat’: each organisation is different, and we need to look beyond the technology itself to find out how to assist you in delivering better value, leveraging new technology, being more efficient, and enhancing service levels.”



# Nutanix's commercial focus will help channel thrive

**From** the company that first made storage infrastructure invisible, there is a new promise to make clouds and in fact, all of IT, invisible. But what does Nutanix mean when it professes to make the physical – invisible? It is simple really; the company is in the throes of developing solutions that simplify all actions between the data centre and the cloud. It is a process that sees the often-manual laborious management and provisioning tasks literally get absorbed by the software.

At the .NEXT conference in Copenhagen, attended by local partners, customers and press, Nutanix's CEO Dheeraj Pandey stated: "We said we're going to compress everything into pure software, and converge the whole experience for the application folks so that they didn't have to beg, borrow and steal infrastructure from server, storage, networking and virtualisation people. They all just became one."

It is a goal that the company, now ten years on, is making huge strides in day-by-day and according to Gartner is the leader in the hyper-converged software market.

## Local news and commercial strides

Until recently the Nutanix local team has focused on enterprise business. Securing big name deals is good for its channel. But a shift in focus two years ago opened up a much wider commercial market ripe for the picking.

According to Paul Ruinaard, regional director Sub-Saharan Africa at Nutanix, the company took a global decision just over three months ago to formalise its focus on the commercial sector. With a renewed focus must come an improved channel focus and strategy and it has also made significant additions to its Channel Charter that supports partners looking to break into this market.

"Our channel charter includes a host of incentives, programmes and channel enablement initiatives – it is designed to help customers break into the commercial market as well as broaden the channel and open up the market. We have a good solid message to market and we believe this will gear us better to deliver it," states Ruinaard.

"New logo business is important to Nutanix and our partners. As a 100 percent partner-driven business we need to make sure we are giving our partners exactly what they need to mobilise and enable themselves and their customers.

As part of this new channel focus comes a new regional focus too and partners and customers will be happy to





**Paul Ruinaard, Regional Director Sub-Saharan Africa at Nutanix**

know that each major region within Sub-Saharan Africa has a dedicated team looking after them. This includes resources for the Cape, KwaZulu-Natal, Gauteng, Indian Ocean Islands and greater SADC areas.

### **What happened at .NEXT?**

While sales, the channel and resources are critical to Nutanix achieving critical mass in the region, it can't take its eyes off innovation, partnerships and development. At .NEXT the company took the strongest African contingent to date.

The first announcement making the headlines included the fact that it, with Hewlett Packard Enterprise (HPE), announced the general availability of GreenLake and ProLiant DX solutions. The news delivers on the partnership announced between the two companies in April, through which HPE and Nutanix are providing customers and partners greater freedom of choice for building their hybrid cloud strategy.

The second key announcement was that Nutanix and ServiceNow have teamed up to deliver self-service for automating common IT workflows. Central to this is that the Nutanix hyperconverged infrastructure (HCI) platform is integrated with the ServiceNow IT Operations Management solution, meaning ServiceNow customers can not only discover Nutanix HCI environments automatically, but also gain access to Nutanix-powered IT services and get direct notification of critical incidents related to Nutanix HCI in their private clouds.

### **Tying it all together**

"I believe that as a business we are now in a position to really move forward. We have built the capacity, have the breadth of solutions and already have a strong customer base in place that is using Nutanix to make a big difference on how they navigate the infrastructure of the future. But there is so much more of the story to tell – we have so many tools that customers don't even know are at their fingertips, which we need to start to better unpack.

"Looking ahead we are going to rely more and more on our channel to help us continue our lead in this race and are excited about what we can achieve in the future together," ends Ruinaard.



The company took a global decision just over three months ago to formalise its focus on the commercial sector. With a renewed focus must come an improved channel focus and strategy and it has also made significant additions to its Channel Charter that supports partners looking to break into this market.



# Becoming more cyber-savvy within the OT environment

**Organisations** running operational technology (OT), which Gartner describes as hardware and software that detects or causes a change through the direct monitoring and/or control of physical devices, processes and events in the enterprise, have increasingly come under cyber attack.

Malware has been sending shockwaves through sectors such as oil and gas, utilities, chemical manufacturing, waste management, mining and more.

So said Datacentrix security business unit manager, Wayne Olsen, who spoke at the company's Mining Indaba event, which took place at Zebula Lodge in the Limpopo province.

"Back in 2010, the Stuxnet malicious computer worm was credited to have caused major damage to Iran's nuclear programme, with US and Israeli governments purportedly using stolen machine identities to infect Iranian nuclear centrifuges," Olsen explained. "In October 2018, Gholamreza Jalali, head of Iran's civil defence agency, announced that the country had neutralised a new generation version of Stuxnet, which was more complex, and could be classed as a weaponised grade malware."

In 2017, a type of malware discovered at a petrochemical plant in Saudi Arabia provided hackers with remote access to the plant's safety instrumented systems; essentially the final defence line against life-threatening disasters. Known as 'Triton', the malicious software targeted a safety controller module, triggering trips that brought the plant to a halt

twice, and put lives at risk. On investigation, it was found that the hackers seem to have had access to the plant's IT network since 2014.

"We've also learned that Havex, a remote access trojan (RAT) discovered in 2013, was used as part of an espionage campaign targeting industrial control systems (ICS) across numerous industries, from industrial equipment providers, energy grid operators, electricity generation organisations, and petroleum pipelines, to the pharmaceutical, defence and aviation sectors.

Linked to Russian Intelligence Services (RIS), the Havex malware is said to have impacted around 2,000 infrastructure sites, mostly within the US and Europe, and involved three stages of attack, the first being spear-phishing to infect computers and collect information. Havex's second stage targeted users visiting legitimate websites, via watering hole attacks, where they were redirected to servers that infected software. The third phase of an attack saw contamination via the download of genuine applications on vendor websites, with Havex then locating Supervisory Control and Data Acquisition (SCADA) or ICS devices on the network, and sending the data back to command and control servers.

"One point that is clear is that the motivation behind all of these cyber attacks is financial," clarified Olsen. "The cyber crime economy generates around 1.5 trillion dollars in profit per year, with ransomware attacks taking place every 15





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"And with it taking up to 49 days for a breach discovery, it is no surprise that there is a huge demand for cyber security, and that we are seeing the industry grow in leaps and bounds, set to be worth \$300 billion by 2020."

Olsen explained that there are several main challenges faced by today's chief information security officers (CISOs) when it comes to OT security.

"Within the OT environment, standard IT security controls and technologies either don't translate or are prohibited due to the disruption they may cause to operational processes. In addition, OT devices are often plugged in straight out of the box, using default passwords and with easily discoverable and exploitable default settings.

"Software and firmware may contain vulnerabilities, or were designed without modern security methodologies (encryption, data validation). Finally, patching often does not take place, as it can be disruptive to uptime, can void warranties, or cannot be done as the organisation is using legacy technology no longer supported by the vendor."

The solution, said Olsen, is for companies to compare the aggregate access of the network to the access designed in security policies, analysing by Purdue model level, device type, and so on. "It is also necessary to look closely at access end-to-end, to troubleshoot connectivity issues and protect critical assets, as well as to identify critical-risk exposed and exploited vulnerabilities to effectively plan patches or mitigation. Lastly, processes to maintain uptime must be automated to avoid costly or dangerous disruptions."

However, he added, technology is not the only answer. "We've seen a 120 percent year-on-year increase in OT-specific vulnerabilities. The main sources of industrial control system (ICS) infection for past year were: the Internet (20.6 percent); removable media (8 percent); and mail clients (4 percent). Therefore, it is critical that organisations making use of this type of technology must also look at the end users, and ensure they receive the training needed to raise awareness of cyber threats, how they can infiltrate ICS technology, and how employees inadvertently play a role in this. Once employees and executives alike have a greater level of understanding on how to mitigate these threats, their behaviour will change, which should bring about a positive impact on security levels."

**Wayne Olsen, Security Business Unit Manager at Datacentrix**



# The importance of being human in the digital age



**Businesses** embarking on a digital transformation journey must ensure they remain cognisant of the human element within this process – how people react to new technologies, for instance, and their fears of being replaced by a machine – or they will be doomed to failure.

So said Bill Hoggarth, national sales manager: Digital Business Solutions at Datacentrix, who was speaking at the 2019 OpenText Digiruption Indaba.

“How we use information as human beings is becoming ever more important,” he clarified, referencing bestselling book *Humanification. Go Digital. Stay Human* by author Christian Kromme. “The word ‘humanification’ originated in the mid-19<sup>th</sup> century from the German word ‘menschwerdung’, meaning the action or process of making something human. Kromme’s writing demonstrates the way in which technology unites humanity into one big organism, giving new insights into how to look at technology and its effect.”

According to Kromme, “Humanification is more than just an idea; it’s a new wave of understanding that helps to make sense of what’s driving technology, what’s in store for a new, more collaborative society, and how we do business in the future.”

And this statement corroborates with the Datacentrix mindset, said Hoggarth; as a business technology journey unfolds, organisations must keep tabs on whether it is impacting on human behaviour, with the result of driving change at the human level to unlock new and different methods of executing tasks and doing business.

Hoggarth likened the successful adoption of so-called fourth industrial revolution (4IR) technology building blocks to the local rollout of the e-toll gantries more than five years ago. “If your technology is strides ahead of humankind’s willing acceptance, it’s just not going to work,” he stated. “These 4IR technologies have all been around for some time now, but are exponentially more powerful than ever before, making end-user acceptance increasingly critical.

“If it doesn’t weave the individual being human into the digital age, then 4IR just isn’t worth the time we ascribe to it; you might have all the latest bells and whistles available, but no-one will be using them. The e-toll project – and resultant public backlash – is a case in point.”

He maintained that businesses need to look at what has worked within the company to radically change behaviour, and why it was successful. “You need to find out what has altered company culture, and how it has had a positive effect on people’s day-to-day tasks.

“Steve Jobs once said you have to start with the customer experience and work backwards to the technology, and this is even more critical today than ever before. Businesses must have an end goal or desired outcome in their sights, and work back to the type of solution to be implemented. Technology acceptance is essentially people-led, so it is important that end-users are aware of the fact that these new solutions will remove rote, systematic processes and unlock more, but different, job functions. They must be empowered to embrace technology and new processes willingly.

“This is a great mindset when we’re considering desired future states, whether we’re talking about a content



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management deployment, or whether we're looking at changing the way that people create, author, manage and then make available the intelligence within documents and records. It's really important that we think that way, instead of hastily jumping onto the latest technology bandwagon because it sounds exciting."

Hoggarth made an analogy comparing today's use of technology to the change in our approach to food. "High profile chefs like Heston Blumenthal have made us look at food in a completely different light, turning the simple act of eating into a multi-sensory experience with access to greater flavours than ever before.

"So too in the technology world, we are no longer constrained by what is housed within a data warehouse. We now have the capacity to access structured and unstructured, formal and informal, and internal and external data like never before. This means that we're starting with more – and different – raw data 'ingredients', in real time, which can be cleansed, prepared, and brought together into a more palatable format for presentation to the correct person, at the right time, and at the right 'portion' size for those particular needs."

A very important first step in unlocking the barriers to a successful digitalisation programme is communication, said Hoggarth. "We need to talk to employees as humans operating within the digital age. We need to communicate with colleagues and executive management to find out how their day-to-day activities can be positively affected. We also need to look within, identify whether we're setting the right example, and see that we have embraced the benefits of digitalisation ourselves."



## PARTNER EVENT

# Unwrapping real security and compliance issues

**Datacentrix** and Cisco hosted an informative roundtable discussion about the security and compliance challenges that organisations are facing today.

The interactive conversation was held in a relaxed environment at a boutique hotel in Johannesburg. Chris Pretorius, Cisco Business Unit Manager at Datacentrix kickstarted the discussion, which was facilitated by Hardus Dippenaar, Datacentrix Senior Network Architect, and Corien Vermaak, Cyber Security Specialist at Cisco Systems (South Africa).

Thanks go to our guests for being involved in the conversation and for making the event a great success.



# How enterprise open source subscriptions deliver business value

## Providing guidance, stability, and security for business-critical applications

**According** to a recent Red Hat report, The state of enterprise open source, 69 percent of IT leaders said that open source software plays a strategic role in their enterprise. Most agree that the innovation and security of enterprise open source are some of the top benefits, in addition to the cost savings. However, many respondents still have concerns about the security of unmanaged open source code found across the web or brought in through dependencies. IT leaders need a trusted open source software provider so that they can capture open source innovation – while retaining the stability and reliability of enterprise software.

A Red Hat subscription offers production-ready code, lifecycle management, software interoperability, and access to experts who can help you run your business. Customers can also use the intuitive, information-rich Red Hat Customer Portal to access tools and resources. In addition, IT groups can build their expertise by using the Red Hat Knowledgebase to find resources and product documentation and participate in the open source community. A subscription provides an ongoing relationship with Red Hat that delivers business value and helps customers thrive.

### Features and benefits of a Red Hat subscription

Why should you purchase a subscription from Red Hat? The features and benefits of a Red Hat subscription include:

- Stable open source technology, organised and optimised for enterprise use;
- Security and accountability from a trusted advisor;
- Knowledge and influence in open source communities to pursue innovation and development;
- Access to technical support, documentation and tools;

- Flexibility with compatible, vendor-agnostic solutions and longer life cycles;
- Partnership with Red Hat from proof of concept (POC) to deployment and beyond; and
- Broad ecosystem of partners, including original equipment manufacturers (OEM), channel, hardware, software, cloud certification (CCSP), and more.

### Stable open source technology, organised and optimised for enterprise use

Red Hat helps you standardise and streamline your software resources so you can grow and transform your business instead of spending time managing relationships. Red Hat advocates for your technology needs with communities and partners so you can focus resources and budget on new products. We refine open source innovation so that your technology is stable for production environments.

A Red Hat subscription includes a set of assurances that contribute to your success, including:

- **Product upgrades:** Unlike proprietary software licences, Red Hat subscriptions apply to the entire life cycle of the product through all its versions. Customers are entitled to unlimited upgrades, but they are never forced to upgrade. This approach ensures that customers are in control of the timing of upgrades.
- **Quality testing:** The Red Hat Quality Assurance team works closely with our Product Development teams and provides the final engineering check before Red Hat open source products are released to our customers and partners. The program includes acceptance, functionality, regression, integration, and performance testing to achieve the high quality that characterises Red Hat products.

- **Legal protection:** The Red Hat Open Source Assurance program provides a level of protection from legal harm for customers who develop and deploy open source solutions. The program includes assurances for customers purchasing subscriptions to Red Hat Enterprise Linux®, Red Hat Middleware, and other Red Hat subscription products.

### Red Hat product security

Red Hat's stable code is backed by a dedicated team of engineers who monitor, identify and address risks to protect our customers' data from meaningful security concerns. If a vulnerability occurs, customers can rely on the clear, calm and accurate advice from the Product Security team to help them quickly assess the risk to their environment and minimise the impact to their business.

### Access to technical support, documentation and tools

Technical support is a key aspect of Red Hat's customer engagement philosophy. The Red Hat Customer Portal is the hub for technical support, providing access to Red Hat subscription resources and offerings a convenient way to manage and renew subscriptions.

With a premium Red Hat subscription, customers have 24x7 unlimited access to our global network of experienced, motivated, and knowledgeable technical support engineers via phone or the Customer Portal. Red Hat customers are not required to reproduce or justify an issue to receive technical support from a support engineer. And customers do not have to have an issue already identified to benefit from a Red Hat subscription – the goal is to avoid issues by guiding customers through planning, deployment, and operation. In addition, a Red Hat subscription includes service-level agreements with response times from two business days to one hour.

### Knowledgebase

When things go wrong in a production software environment, the ability to access the right information quickly can be the difference between a fast return to normal operations and a costly outage. Red Hat provides its subscribers with a wealth of relevant, accurate knowledge that can be quickly and efficiently accessed via the Red Hat Knowledgebase. The Red Hat Knowledgebase is an organic resource, continually growing as Red Hat develops content in response to specific customer requests. Customers can quickly locate articles, solutions, and product documentation relevant to their problem. System architects can browse detailed technical case studies that Red Hat engineers have designed, tested and benchmarked.

### Ownership of multi-vendor cases

The most difficult issues to resolve are those that affect products from two or more vendors. Unlike other vendors, Red Hat takes ownership of any issue that involves one of

our products. Red Hat engineers rely on their own extensive knowledge of open source products, as well as relationships with other vendors and the open source community, to find a solution that encompasses all of the relevant products.

### Flexibility with compatible, vendor-agnostic solutions, and longer life cycles

Red Hat customers benefit from the largest commercial partner ecosystem of certified, third-party solutions that are fully supported on Red Hat Enterprise Linux. The designation "Certified by Red Hat" identifies products and services that are tested, supported, and certified to perform with Red Hat technologies.

As part of our certification program, we maintain a robust list of certified application programming interfaces (APIs). Software changes quickly, making it challenging for application developers to deploy across a variety of software releases. Red Hat ensures that previously developed applications will be compatible with both current and future versions. Red Hat certifies software to reduce compatibility issues. Red Hat offers three kinds of certifications:

- Certified hardware ensures that Red Hat solutions are running on tested, verified, and supported hardware.
- Certified software identifies third-party software solutions tested specifically on the Red Hat platform.
- Certified cloud providers offer trusted clouds where customers can run applications on Red Hat technologies.

Unlike proprietary software licences, Red Hat subscriptions are not tied to a specific version, but cover the entire life cycle of the product. With a Red Hat subscription, customers can upgrade to any supported version of Red Hat software and deploy the software on physical, virtual, or cloudbased servers. By maintaining active Red Hat subscriptions, customers have access to all supported versions in both binary and source form, including all enterprise product documentation, security updates, and bug fixes.

Red Hat product life cycles are generally three, five, or seven years, with extended life support available for up to 10 years. Committed, longer life cycles mean more choice and flexibility, reduced cost and risk, and easier planning.



# Taking your career as a developer to the next level

**The market** for local developers is shifting, with demand increasing for skills in languages such as Python. In fact, according to 'Stack Overflows Developer Survey 2019', Python is now the fastest-growing major programming language, beating out Java this year to become the second most popular language (behind Rust) after having outstripped both C# in 2018 and PHP in 2017.

Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world, with almost 90,000 developers partaking in the 2019 survey. This year, 73 percent of developers rated Python as their most loved language, and it took first place as the most 'wanted' language by 26 percent of respondents.

"This growing demand for Python skills is based on the fact that it has become a preferred language for data science and machine learning, allowing businesses to harness the power of AI-driven chatbots, robot process automation (RPA) and the Google Cloud platform, through sophisticated algorithms," explains Ruan Erasmus, Account Manager: Managed Talent Solutions at Datacentrix.

Datacentrix is a high performing and secure ICT solutions provider that also provides personalised recruitment services.

"The benefit for South African developers looking to take advantage of the growing demand for this skill is, firstly, that Python is easy to learn and very readable, with a more gradual learning curve than other languages. At the same time, is it extremely powerful from an automation point of view. This makes it appealing both for those starting out in development as well as for more experienced developers."

In fact, says Erasmus, developers that are already proficient in languages like Java or C# will find it straightforward



Developers that are already proficient in languages like Java or C# will find it straightforward enough to add Python to their existing skill sets.

enough to add Python to their existing skillsets. And this could be achieved either through a bridging course, or even via self-learning platforms, he adds.

"Developer communities like Stack Overflow, as mentioned above, and GitHub foster a collaborative approach, and provide the opportunity for developers to hone their skills on shared projects, as well as to have their code critiqued."

The next step, says Erasmus, is to find your spot on one of the innovative local projects looking to put these skills in place.

Datacentrix' Managed Talent Solutions business unit is a specialist recruitment provider that supplies, manages and retains top talent, including Python developers. The organisation is an accredited member of APSO (Association of Personnel Service Organisations) and adheres to the APSO Code of Ethics and is fully compliant with the Labour Relations Act.

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