

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

Mining organisation Assmang is rolling out a groundbreaking 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 Infracore, Datacentrix's infrastructure design and deployment business unit. Ferdi Kirsten, manager: IT 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, management. The Huawei Fusion Module 2000 Containment System comes with the 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, Infracore 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 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’s 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.

