



D'CRYPT

D'Crypt is a high-value design and development house based in Singapore. It offers leading-edge cryptographic technology and components that form integral parts of their customers' information security appliances, systems and applications. Set up in 2000, it was acquired by Temasek, a global investment company owned by the Singapore government, in 2019.

Industry

Technology

Strategic Priorities

- Anywhere Workspace

Partner

Net One Asia, a VMware Premier Partner, helps businesses achieve greater efficiency and scale through services that include architectural assessment, design, implementations and support for digital workspace and hybrid cloud infrastructure.

VMware footprint

- VMware® Horizon®

D'Crypt Deploys VMware Horizon to Boost Efficiency and Market Growth

D'Crypt, a pioneering electronics design firm specializing in security products, relied on physical Internet separation to protect the data on its endpoints, resulting in reduced employee productivity. To tackle workflow and security issues, the company partnered with Net One Asia to implement VMware Horizon throughout the company. Deploying its self-designed Secure Computing Anywhere Reduced form factor (SCA-R) zero client allowed D'Crypt to enhance security against cyber threats, create flexibility for remote work, and lower operating costs. The company is launching SCA-R with VMware Horizon to provide an end-to-end secure computing solution for organizations in Singapore and the Asia Pacific region.

Innovating security to better protect everyone

Founded by a team of engineers, D'Crypt is a high-tech design firm that conceptualizes and delivers bespoke secure electronic products. Working with the Singapore government and military as well as MNCs, the cryptographic tech firm offers services in defense and security, transportation, secure Internet of Things, and high-performance computing.

"Our work improves and protects lives by enabling better information security for everyone, everywhere," says Dr. Pang Liang Teck, CEO, D'Crypt. "For example, every vehicle in Singapore is fitted with an in-vehicle unit that allows drivers to access toll roads and paid car parks. Our chip powers that device."

"The internet separation was a hassle and we couldn't do our work seamlessly. We needed an agile and future-ready way of working that will prioritize security while enabling us to collaborate easily."

Dr. Pang Liang Teck, CEO, D'Crypt



Internet separation slowing down productivity

D'Crypt specializes in data security products and components on the cutting edge of technology and has immediate practical uses in the industry. This enables customers to generate a constant stream of new and innovative products by integrating its components into their end systems or building applications on top of its products.

Given that the bulk of D'Crypt work is highly confidential, security is its top priority. It needs to protect and secure its digital assets, which include classified data and intellectual property. To guard against malware, ransomware and data exfiltration, the company used internet separation to protect the entire endpoint ecosystem.

The physical internet separation heightened security but user experience was often negatively impacted. Senior employees needed two computers: one on an internet-accessible network and another on a non-internet-accessible network, reducing productivity while doubling capital costs. This "air-gapped" workflow was further exacerbated during the COVID-19 pandemic lockdowns, making it difficult to work remotely.

At the same time, D'Crypt customers rely on the team to stay ahead of worldwide trends. To remain a trusted security leader, the company needs to be able to respond quickly to challenges and issues faced by its customers but its IT setup was slowing them down.

"The internet separation was a hassle and we couldn't do our work seamlessly," says Dr. Pang. "We needed an agile and future-ready way of working that will prioritize security while enabling us to collaborate easily."

Turning to VDI for secure and personalized workspaces

The IT team at D'Crypt had been exploring using virtual desktop infrastructure (VDI) to solve their challenges, as it is one of the best ways to secure digital assets since data remains on the company's servers while images are sent to client devices.

"We needed support in implementing a VDI solution, so we turned to our trusted partner, Net One Asia, who is the renowned leader in this field in Singapore," says Edwin Lee, director of business development, D'Crypt.

Net One Asia is a VMware Principal Partner and has achieved a Master Services Competency in Digital Workspace.

"Now that we're using VMware Horizon on SCA-R, our zero-client device, it is a relief that we don't have to toggle between two systems anymore. It's plug and play, with Horizon delivering an immersive, feature-rich user experience."

Edwin Lee, Director of Business Development, D'Crypt

"We started by assisting D'Crypt in evaluating the various VDI solutions, and landed on VMware Horizon since D'Crypt was already using VMware products," says Moses Yeo, managing director, Net One Asia. "Leveraging best-in-class management capabilities and deep integrations with the VMware technology ecosystem, the Horizon platform is simple and quick in secure delivery of virtual desktops and applications, bringing the best digital workspace experience to all users."

Rolling out the solution throughout the company, the project took over six months from concept to implementation. Using Horizon, D'Crypt can now deliver stateless virtual desktops and published applications with network policies that secure the environment.

With Instant Clone Technology, the IT team can create a desktop from a parent virtual machine in seconds, just in time for a user to log in. There is no need to pre-deploy consuming resources that act as an attack surface. Instead, the team can create instant, in-memory, non-persistent clones on demand and delete them afterwards for maximum security and efficiency.

Thanks to role-based persona and customization through Dynamic Environment Manager (DEM), IT can now deliver a consistent and personalized workspace experience to end users across devices and locations.



Empowering secure remote work

With more companies turning to VDI to enable employees to work from anywhere, most technologies that enable remote work such as VDI or VPN gateways are also coming under increasing attack.

To solve this problem, D'Crypt developed a sleek, portable and powerful zero-client device for securely accessing VDI and Remote Desktop Protocol (RDP) services hosted on enterprise data centers or in the cloud. Named Secure Computing Anywhere-Reduced form factor (SCA-R), the zero client minimizes cyber-attack surface and provides enhanced end-to-end protection for data in transit and at endpoints through an integrated backend concentrator.

As the trusted advisor, Net One Asia was closely involved in integrating Horizon with SCA-R, and supported the company's internal rollout of the zero client. Almost the same size and weight as a mobile phone, the pocket-sized zero client is highly portable, and employees only need to plug it into a monitor to start working immediately from anywhere.

"Now that we're using VMware Horizon on SCA-R, it is a relief that we don't have to toggle between two systems anymore," says Lee. "SCA-R is so portable that we can truly work from anywhere and on any device. It's plug and play, with Horizon delivering an immersive, feature-rich user experience."

More importantly, this integrated solution eliminates exposure to ransomware infections, data loss and data leakages. "Our solution is designed with military-grade security in mind, enhancing our protection from cyber threats," adds Lee.

Expanding secure computing solutions to the Asia-Pacific region

On top of improved work efficiency, D'Crypt found that the total cost of ownership per user has gone down as they are now able to replace existing endpoints such as laptops with SCA-R accessing VMware Horizon.

Operating costs have also decreased as the company no longer needs to invest in costly endpoint protection and monitoring tools. Moreover the zero client consumes significantly less energy than laptops and desktops, thus furthering the company's ESG goals.

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Dr. Pang Liang Teck, CEO, D'Crypt

Having experienced the benefits that come along with the integrated solution, D'Crypt is now ready to take it to companies in the country and beyond. Even though SCA-R supports secure access of mainstream VDI services, the firm decided to partner with VMware for the launch.

"With VMware virtualization heritage and leadership in digital workspace technology, and based on our positive experience, we're going to market with VMware Horizon as we introduce SCA-R to organizations in Singapore and the region," says Dr. Pang.

Win-win partnership for all

As digital technology advances, security threats will only become more numerous and more malicious, and a multi-faceted approach is needed to tackle them. Partnering with VMware to roll out Horizon and SCA-R leads the way.

"At D'Crypt, we have a proven track record in delivering innovative, secure products," says Dr. Pang. "We want to provide true security to organizations so that they can benefit from the latest technologies while safeguarding their future."