

## Quantum Cyber-security tackles some of the toughest cyber-security challenges

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Quantum cyber-security is helping companies tackle the increasing number and sophistication of cyber-attacks. Last week, leading Cloud-Based Document & Email Management provider, NetDocuments, announced a new security architecture integrating quantum-derived random numbers to secure legal documents in the cloud. This included technology developed by QuintessenceLabs. Today one of Australia's major banks, Westpac Group, announced it was investing in QuintessenceLabs, boosting the Group's security capabilities and providing access to a pipeline of innovations developed by QuintessenceLabs. These developments highlight a new generation of security innovations integrating the power of quantum science.

Central to QuintessenceLabs' solutions is a powerful new technology delivering the most secure cryptographic keys using quantum-derived true random numbers. This strengthens the encryption of confidential data, protecting it from the vulnerabilities of deterministic random numbers. The true random numbers are generated at very high speed from unpredictable quantum effects on a laser beam. This technology is complemented by an advanced key and policy manager, and secure storage for data in uncontrolled environments. QuintessenceLabs is also developing ground-breaking Second Generation Quantum Key Distribution providing a secure and future-proof solution for sharing the highest quality cryptographic keys.

NetDocuments will increase the security of their data centers around the world in part by implementing QuintessenceLabs' quantum-enhanced key generation and management. NetDocuments' new security architecture includes multiple layers of encryption keys for each data file and allows customers to hold and control specific keys relating to sensitive documents or content. To support the deployment of this next generation solution, QuintessenceLabs will deliver quantum-enhanced key management appliances to NetDocuments' data centers in North America, Europe and Australia, with potential for further expansion.

Alvin Tedjamulia, NetDocuments' CTO explains, "The underlying randomization technology is a critical component to our key management infrastructure, setting a new standard for best-of-breed encryption, data custody management, and now customer-controlled keys for each individual document or email."

Westpac Group's investment in QuintessenceLabs' technology will significantly boost the bank's security capabilities. "Protection of customer information and sensitive commercial data is an industry-wide priority. This investment signals Westpac is stepping up its proactive, strategic approach to building our security capabilities now and in the future," Westpac Group CIO Dave Curran said. "As we deliver the bank's digital transformation it is essential that we maintain the resilience and security of our systems. To do this we need to continually evolve our solutions to protect our confidential data and we see the relationship with QuintessenceLabs as a significant next step on this journey." As part of the agreement, Westpac Group General Manager Technology and Architecture, Robert Wilson, will be appointed to QuintessenceLabs' Board of Directors.

QuintessenceLabs will use the capital raised to accelerate their product roadmap, driving lower costs and increasing solution flexibility, and expand business development activities to enhance market penetration.

"QuintessenceLabs is delighted to be recognized as a leading innovator of advanced cyber-security solutions", said QuintessenceLabs Founder and CEO, Dr. Vikram Sharma, "While QuintessenceLabs has been engaged with partners in government and aerospace for several years, the partnerships with both NetDocuments and Westpac are a strong testament of our capability to address the toughest security challenges facing commercial customers today."

### **About QuintessenceLabs**

QuintessenceLabs is a leader of commercial quantum security technologies, delivering unique high-value capabilities. These include advanced, interoperable key and policy management, unbreakable one-time pad encryption for vulnerable data, both underscored by the world's fastest commercial true random number generator. QuintessenceLabs has offices in Canberra, Australia and San Jose, United States.

### **About NetDocuments**

Founded in 1999, NetDocuments' cloud-based service allows firms of all sizes to reduce costs and increase security, mobility, compliance, and disaster recovery for documents and email from anywhere and on any device. With offices and redundant datacenters in the US, Australia, and the UK, NetDocuments is able to effectively service their customers in over 140 countries. With anytime, anywhere access, firms are able to increase productivity and improve client experience through a comprehensive cloud-based service.

### **About Westpac**

Westpac Group is Australia's oldest company and bank, celebrating its 200th year in 2017. Its five key customer facing divisions - Consumer Bank, Commercial and Business Bank, BT Financial Group, Westpac Institutional Bank and Westpac New Zealand - serve around 13 million customers. Westpac's portfolio of financial services, brands and businesses is focused on a vision to be one of the world's great service companies, helping its customers, communities and people prosper and grow. From ensuring consumer customers can save and invest with confidence, to serving the financial needs of multi-national corporate, institutional and government clients, Westpac puts its customers at the center of everything it does.

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