WHITEWOOD®

netRANDOM™

NETWORK DELIVERED QUANTUM ENTROPY

ENSURE TRUE RANDOM NUMBERS

netRandom by Whitewood provides a way to access high-quality true random numbers across distributed applications. With a client-server model netRandom distributes true entropy from a quantum source to properly seed random number generation across data centers and networked devices (a similar concept to network time protocol (NTP) for ensuring access to consistent date/time).

Today virtually all random numbers are generated by the operating system. The problem is that software can't generate **true** random numbers. The OS generates 'pseudo' random numbers and relies on having access to a sufficient source of high-quality entropy to achieve that randomness. When local sources of entropy such as system interrupts and user activity become scarce, as they do in virtualized systems and embedded devices, random numbers can become predictable and compromise security applications, particularly those that rely on cryptography.

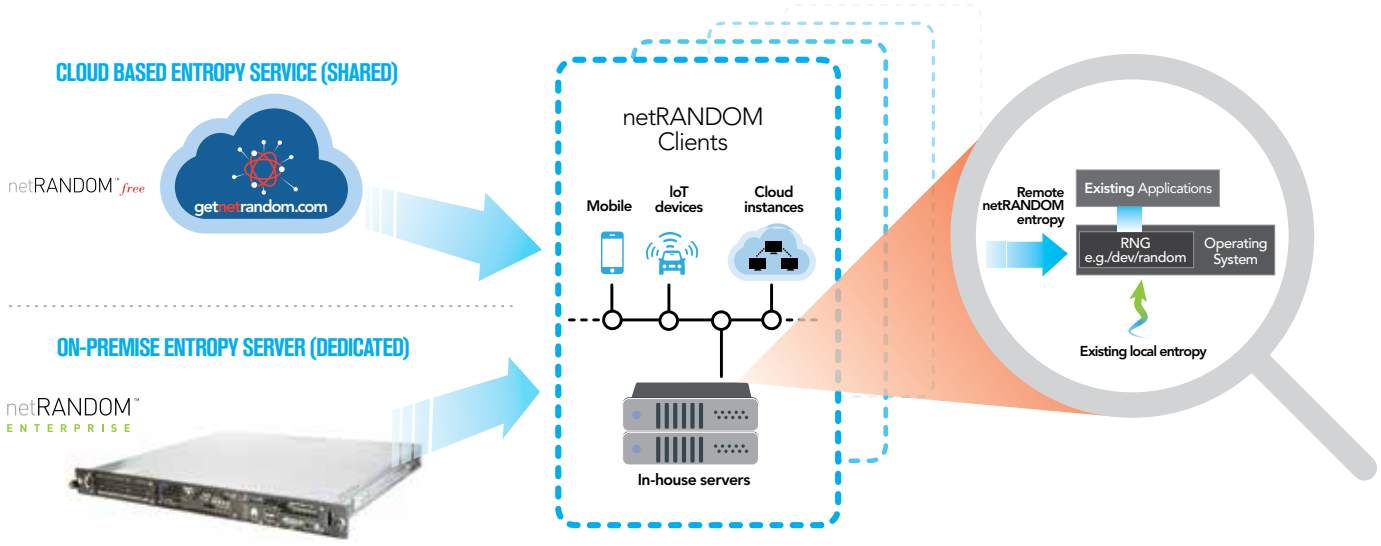
HOW IT WORKS

netRandom acts as a high-quality source of entropy, supplementing existing sources within Linux and Windows instances to enable the generation of truly random numbers that applications access in the normal way through existing RNG commands. Access to the remote netRandom entropy server is provided by a small software agent and requires no changes to the OS or to your applications. We provide two deployment options for the netRandom entropy source; a free public service and an on-premise enterprise entropy server.

WHY IT MATTERS

Security applications rely on random numbers. Anything less than true randomness introduces risk. But randomness is impossible to prove and the availability of entropy is not only extremely hard to measure it also varies from instance to instance and device to device. True confidence in your security system can only come from a consistent supply of high quality entropy delivered directly to all of your RNGs, independently of the local hardware and physical environment.

DEPLOYMENT OPTIONS: CLOUD BASED OR ON-PREMISE



WHITEWOOD 100 High Street 28th Floor Boston, MA 02110 USA
p. +1.617.391.0268 e. info@whitewoodsecurity.com

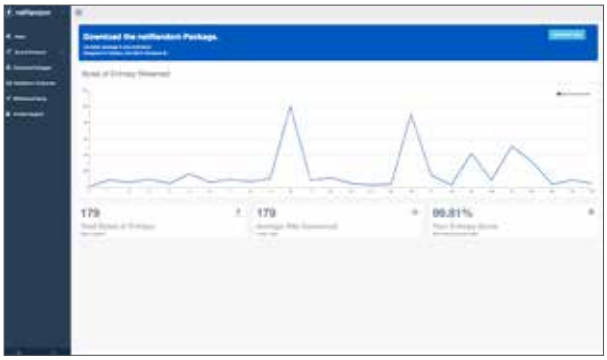
netRANDOM™

WHITEWOOD

SHARE THE POWER OF GREAT ENTROPY

netRandom addresses the threat of entropy starvation across legacy applications and virtualized environments

- Easy access to high-quality quantum entropy
- Works with existing applications
- Supports Linux and Windows environments
- Supplements existing entropy sources for added security
- Secure network delivery to prevent eavesdropping
- Quantum-powered entropy source – Whitewood EntropyEngine™
- Comprehensive monitoring and reporting
- Complies with NIST SP 800-90 A/B/C (draft)



DEPLOYMENT SCENARIOS

The netRandom family offers the option of deploying either by accessing our free cloud-based entropy service (Entropy as a Service) or by installing on-premise, dedicated entropy servers.

Try it for free

getnetrandom.com

	netRANDOM™ *free*	netRANDOM™ ENTERPRISE
Deployment model	Cloud based entropy service (shared) *getnetrandom.com*	On-premise netRandom entropy server
Entropy quality	Quantum entropy source (>99.4% pure entropy)	Quantum entropy source (>99.4% pure entropy)
Access method	netRandom Client	netRandom Client
Client OS support	Windows and Linux	Windows and Linux
Usage statistics	Yes	Yes
Support for unique Clients	No	Yes
Support for Client groups	No	Yes
Support for multiple users	No	Yes
Support for user groups	No	Yes
Client entropy API	No	Yes
Server Provisioning API	No	Yes

APPLICATION EXAMPLES

ENTERPRISE DATACENTERS

The increasing volume of long-term and session key generation coupled with scrutiny over key management processes drives the need for high-assurance random numbers. This is in conflict with the trend towards the use of virtualized application environments where access to entropy for re-seeding can be very poor. netRandom addresses this conflict by making true entropy readily available across the entire data center.

INTERNET OF THINGS

Industrial IoT devices and embedded systems with limited processing power and minimal access to entropy risk becoming a point of weakness over lifecycles that can span more than a decade. netRandom can be used to re-seed IoT devices as a background network service hosted by the network operator. Whitewood has partnered with providers of embedded crypto toolkits to accelerate and simplify the development and certification of embedded systems.

CLOUD AND HOSTING SERVICES

Providers of hosting, colocation and cloud services are constantly looking to enhance their services portfolio and better serve their customers. The delivery of high quality entropy as a service to tenant systems presents a compelling opportunity to drive premium revenue, demonstrate thought leadership, create differentiation and open access to high assurance markets through security certifications.

SECURITY PRODUCT VENDORS

Enhancing product security can be a differentiator and create access to new markets. Almost all IT products incorporate encryption or other forms of crypto and therefore random number generation is a critical capability. New standards activity such as NIST SP 800-90B is expected to impact certification schemes such as FIPS 140 and Common Criteria, and netRandom can play an integral role in product positioning.

whitewoodsecurity.com

WHITEWOOD 100 High Street 28th Floor Boston, MA 02110 USA
p. +1.617.391.0268 e. info@whitewoodsecurity.com