newkeyslab COMPANY OVERVIEW

May 30, 2023

Company Name: NEW KEYS LAB LTD. (NKL)

Key Stakeholders: Dr. Gil Pogozelich, Mr. Yossi Avni, Mr. Maor Cohen.

Fields of Activity: Encryption / Cybersecurity

A proprietary encryption platform safeguarding digital assets with unrivaled strength and speed.

About

NKL is a cutting-edge cybersecurity company that has developed a patented network security technology to securely encrypt any connections, even over non-secure channels. NKL enhances symmetric encryption technology by creating a platform of encrypted networks between software and/or hardware components, without any key exchange.
This proprietary platform allows for both the ability to achieve a full Zero-Trust isolated environment in any organization network, protecting, from "Man-In-The-Middle" attacks, and for the ability to determine encryption strength in proportion to the desired units of processing power.
This innovative solution is a game-changer in the industry, providing robust protection against a wide range of cyber threats, including hacking attempts, data breaches, and many more. With this technology, users can enjoy enhanced performance and peace of mind, knowing that their organization is fully protected.

The Need

The cybersecurity industry has to address the following crucial needs:

1. **Better performance of data in transit**:
    - **Bandwidth optimization:** A well-known transmission bottleneck, essential for high-performance data transmission.
    - **Encryption optimization:** While essential for securing sensitive information, data encryption adds overhead to data transmission. Optimized encryption algorithms and hardware acceleration can minimize the impact on performance while ensuring secure data transit.
    - **Latency reduction:** Minimizing the delay or latency during data transmission is critical for performance.
    - **Parallelization and parallel processing:** Breaking down large data transfers into smaller chunks and transmitting them concurrently can improve overall performance.

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2. **Better security on data in transit**:
   Avoiding pre-shared keys (PSKs)
   - **Scalability**: PSKs can become difficult to manage and scale in large and complex environments.
   - **Key distribution**: PSKs need to be securely distributed to all communicating parties before they can establish a secure connection.
   - **Key revocation**: If a PSK is compromised or a party needs to be denied access, revoking, or changing a PSK can become extremely inconvenient.
   - **Lack of individual accountability**: With PSKs, it can be challenging to attribute actions or changes in the network to specific individuals or devices. Since all entities share the same key, it becomes difficult to establish individual accountability in case of security incidents or breaches.
3. **Strengthening the keys of symmetric encryption** - this is important to enhance the security and resilience of encrypted data:
   - **Resistance against brute-force attacks.**
   - **Protection against advances in computing power.**
   - **Protection against known cryptographic attacks.**
   - **Long-term security**: In some cases, the encrypted data needs to remain secure for an extended period.

The Market

The Global Data Processing Unit (DPU) market size was valued at USD 0.6 billion in 2021 and is projected to reach USD 5.5 billion by 2031, growing at a CAGR of 26.9% from 2022 to 2031. Allied Market Research, 10/2022.
In 2022, the Global Graphics Processing Unit (GPU) market was valued at USD 40 billion, with forecasts suggesting that by 2032 this is likely to rise to USD 400 billion U.S. dollars, growing at a CAGR of 25% from 2023 to 2032. Statista, 03/2023.
The Global Endpoint Protection Platforms (EPP) Market was valued at at USD 9 billion in 2020 and is predicted to reach USD 29 billion by 2030 with a CAGR of 12.5% from 2021-2030. Next Move Strategy Consulting, 05/2023.
The global cloud computing market size was valued at $569.31 billion in 2022 & is projected to grow from $677.95 billion in 2023 to $2,432.87 billion by 2030. Fortune Business Insights, 05/2023.
The Global Zero Trust Security Market is expected to be worth USD 61 billion in by 2027, growing from USD 27 billion in 2022 at a CAGR of 17.3%. Markets and Markets Report, 05/2022.
The Global Cyber Security Market size is projected to grow from USD 172 billion in 2023 to USD 424 billion in 2030, at a CAGR of 13.8%. Fortune Business Insights, 04/2023.

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The Technology

The technology developed attains better traffic-flow security by continuously changing the main encryption key of a symmetric encryption tunnel, without any needed key exchange, eliminating exposure to Men-In-The-Middle attacks.
Deployment of NKL's technology allows to gain the ability to dynamically set key-exchange-rate, as well as key strength (e.g. thousands of keys, each more than 20,480 bits), greatly diminishing possible brute-force attacks.
The technology enables the creation of a network identity for any component in the network and can be implemented on any layer of the OSI Network Model (from the physical layer to the application), thus enabling a full Zero Trust methodology.
NKL's technology allows the endpoint/component to save the asymmetric transactions of acknowledgment and the exchange of symmetric keys, which enables East-West data transitions over the WAN (Performance wise & Security wise)
NKL's technology is compatible with current protocols (IPSEC, TLS/SSL) and can create customized protocols as well (if needed).

Team

NKL takes immense pride in its exceptional team, which sets it apart from the industry. Composed of professionals with diverse backgrounds, the team brings a wealth of experience from the Israeli Defense Forces, and the military security, high-tech and cyber industries. What makes the team truly special is the fact that its members are not just experts in their respective fields, they are serial entrepreneurs. This entrepreneurial spirit fuels NKL's innovative thinking and drives the company to push the boundaries of what is possible in cyber security. The team also includes individuals with prestigious academic backgrounds, further strengthening its expertise and ensuring solutions of the highest standards. With its combined skills, knowledge, and dedication, the team has developed unique and groundbreaking technologies that deliver unrivaled security solutions to NKL's valued clients.

Go To Market Strategy

NKL is targeting two main types of clients:

1. Tier 1 manufacturers– to extend network performance capabilities at secured data transitions (DPUs, P2P computing, automation, etc.)
2. Cybersecurity companies - integrations and collaborations with End-Point Protection Platform (EPP), Cloud Security (CWPP), and Zero Trust (ZTNA) Security segments.

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Status

NKL has developed the proprietary technology (patents have been filed) and is starting to implement it through strategic partnerships with Tier 1 and Cybersecurity EPP companies.

- **Nvidia** - Integration on Nvidia's DPUs to enable East-West traffic at 1000Gb/s with the highest security level (current limitation 400Gb/s)
- **Cybereason** - Integration as a design partner with the EPP company to deploy NKL's technology on Cybereason's endpoints to extend network management and prevention in the platform.

The Company is now in the stage of transitioning the technology to production levels.

Investment Proposal

The information contained in this overview is non-binding and is intended solely as a basis for further discussions.

We at NKL look forward to our upcoming discussions following which we will be happy to prepare a detailed investment proposal accordingly.

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