Operational Continuity & Cyber-Attack Recovery For ICS & OT Systems

OTD BİLİŞİM
GLOBAL VAD

ICT OTD
PREFER EXPERIENCE ONLINE
Since 2011

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TECHNOLOGIES

Salvador Technologies provides breakthrough technological solutions for operational continuity and cyber-attack recovery, ensuring an easy validation of the backup integrity with an instant restoration test.

Our mission is to ensure operational continuity by providing unique tools and features to minimize the downtime and allow recovery from any scenario.

The company's expertise is based on more than ten years of experience in the National Cyber Unit and elite intelligence corps of the IDF and on the passion for contributing to the global cyber security agenda.

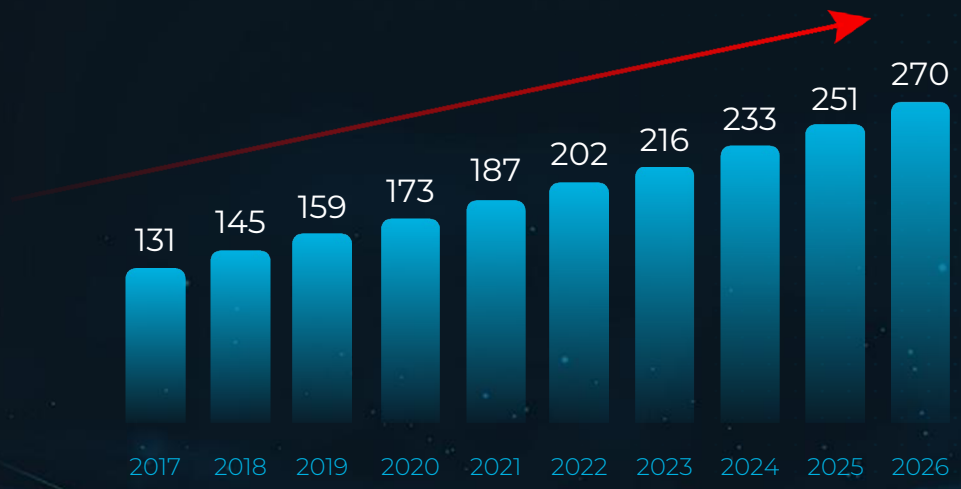
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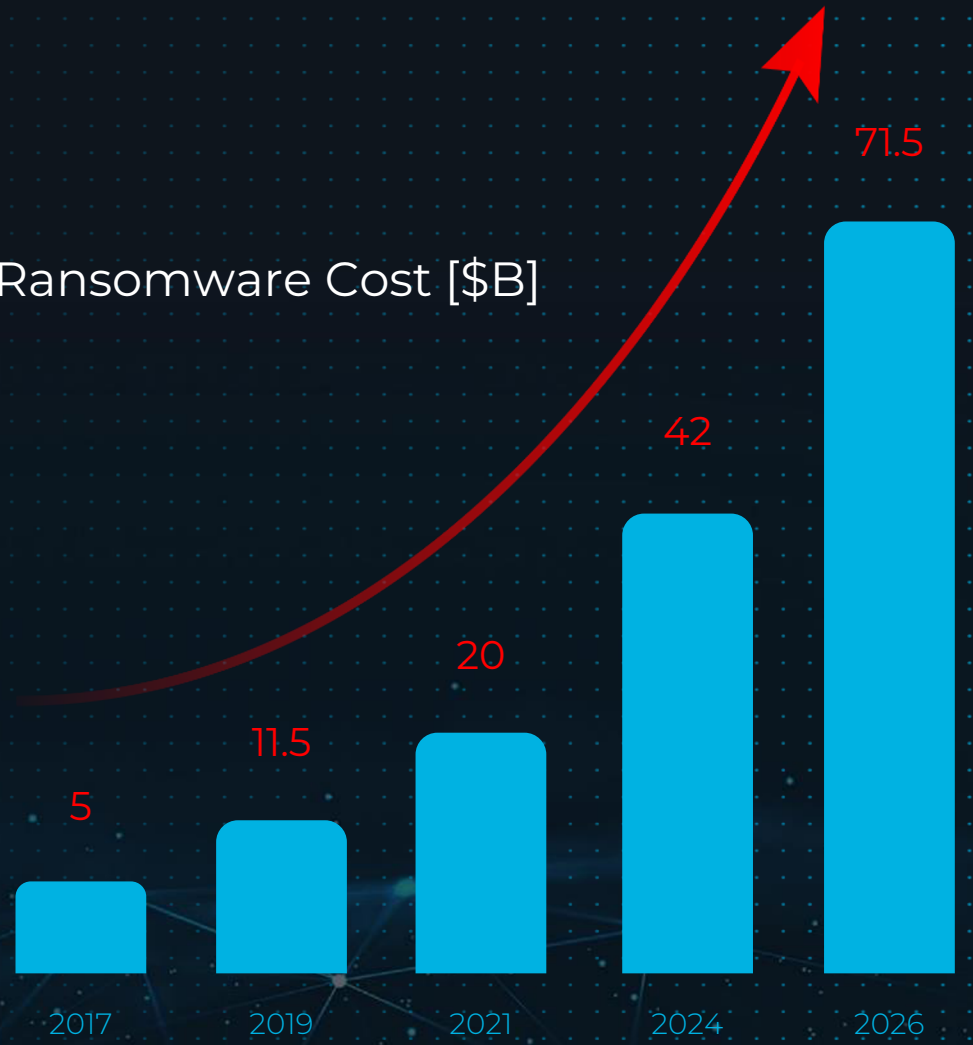
The offense is always one step ahead of the defense

Incident response is critical

Security Investment: [M$]



Ransomware Cost [$B]



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Major Problem: Downtime

One of the biggest problems in the OT & industrial world



Downtime Cost

$260,000
per hour*
(average by Gartner)



Manual and Primitive Backup

External disks, Tapes



Slow Ransomware Recovery

20 days recovery,
single source

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Specific Cases: Loss

Ransomware cost $20,000 per minute

2 weeks downtime

$1.3 billion

MERCK

4 days downtime

$171 million

tsmc

3 months downtime

$52 million

Hydro

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Do you have a plan for an unplanned downtime?



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Our offerings

Revolutionized patented air-gapped technology to ensure

- Operational downtime prevention
- Instant restoration
- Reduced risks of data loss
- Easy validation of the data integrity



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3 Layers of Defense



Air Gap Protection

Innovative Recovery Software

Continuous Monitoring

30 sec

30 sec
and you're back on track!

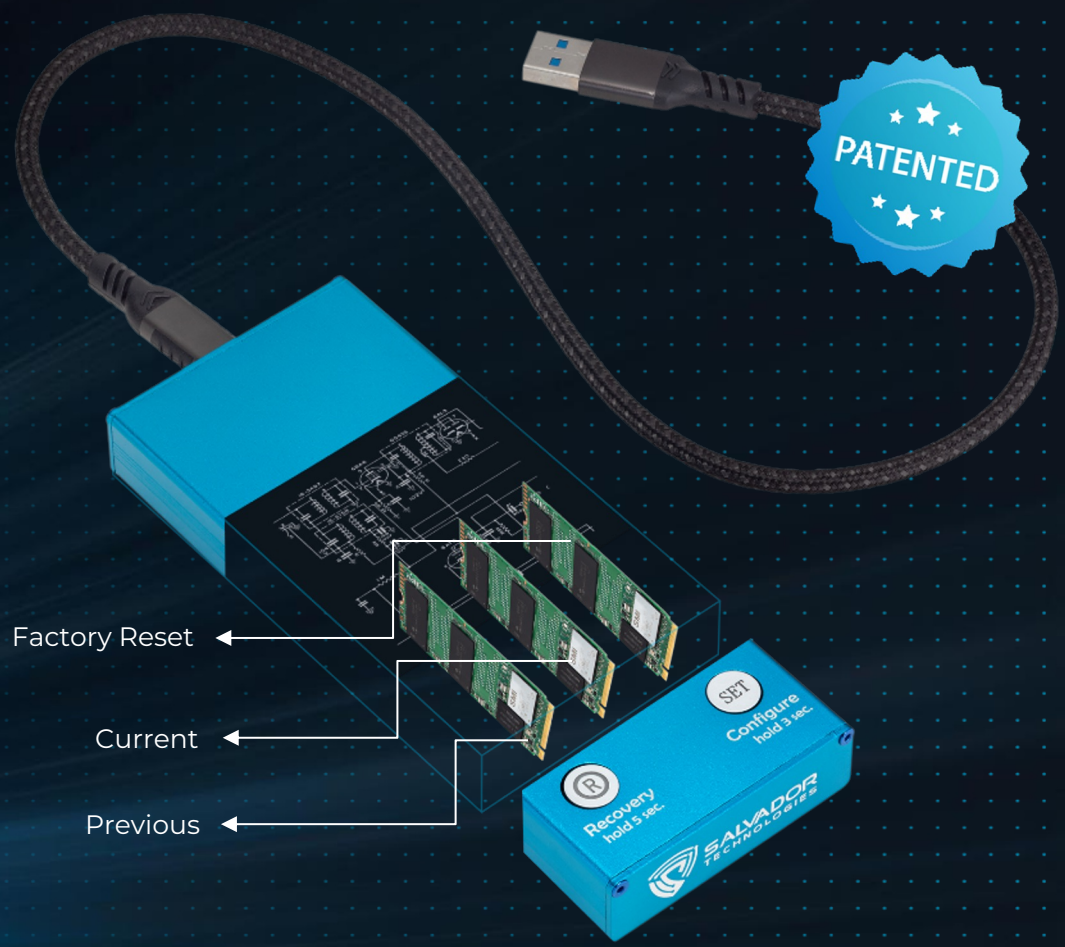
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Air Gap

The algorithm will not allow any external or internal control of this functionality from the computer.

It means, that every X days, a different disk will be accessible to the user for backup of the data – other disks are electronically offline.



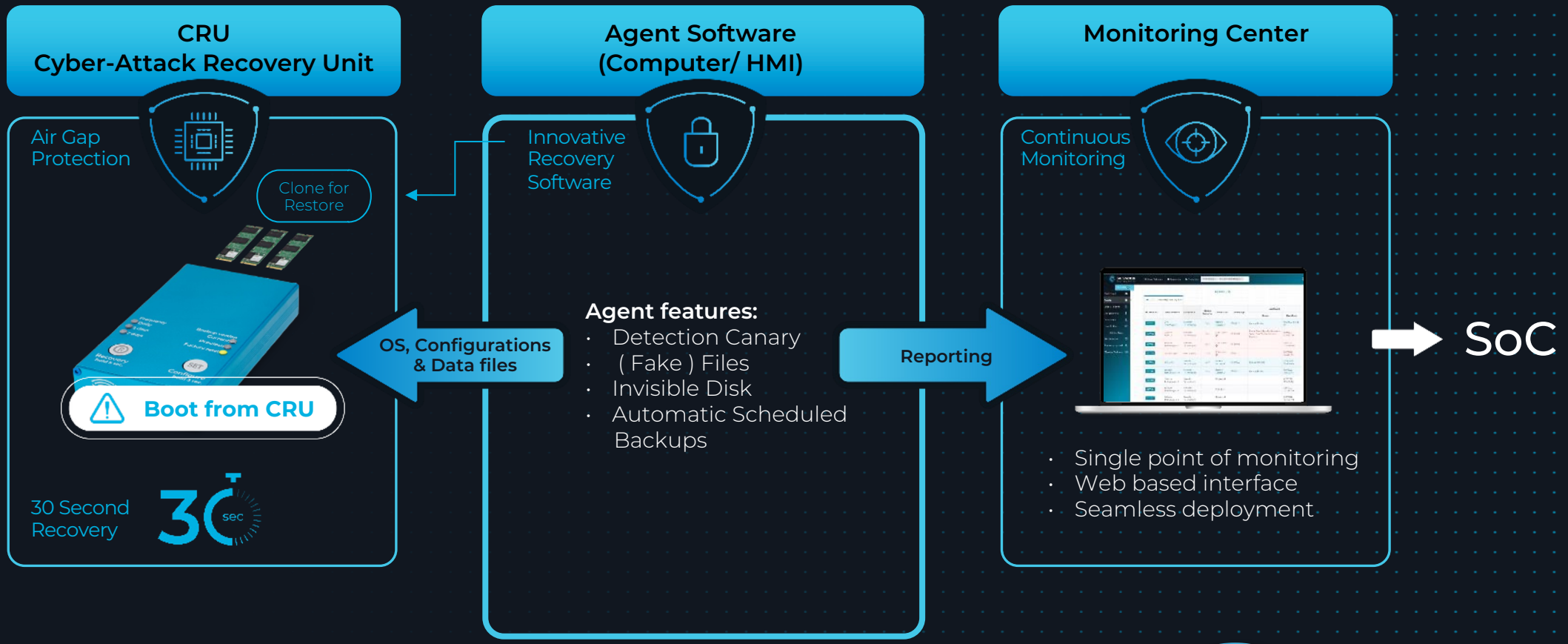
Available capacity: 3 x NVMe drives

Options: 512GB / 1TB / 2TB (PNs: CRU-512 / CRU-1000 / CRU-2000)

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STEP 1 –
Downtime? Reboot Immediately!



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STEP 2 –
Keep working during data restoration

CRU
Cyber-Attack Recovery Unit

Air Gap Protection



Clone for Restore

OS, Configurations & Data files

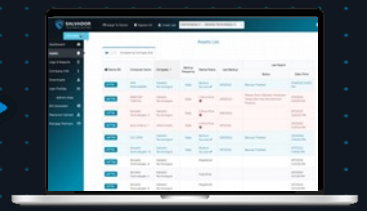
Agent Software
(Computer/ HMI)

Innovative Recovery Software

Reporting

Monitoring System

Continuous Monitoring



- Single point of monitoring
- Web based interface
- Seamless deployment

SoC

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STEP 3 –
Back to normal

CRU
Cyber-Attack Recovery Unit

Air Gap Protection



Agent Software
(Computer/ HMI)

Innovative Recovery Software

Agent features:

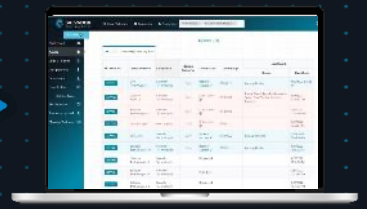
- Detection Canary Files
- Invisible Disk
- Automatic Scheduled Backups

Boot from Computer

Reporting

Monitoring System

Continuous Monitoring



- Single point of monitoring
- Web based interface
- Seamless deployment

SoC

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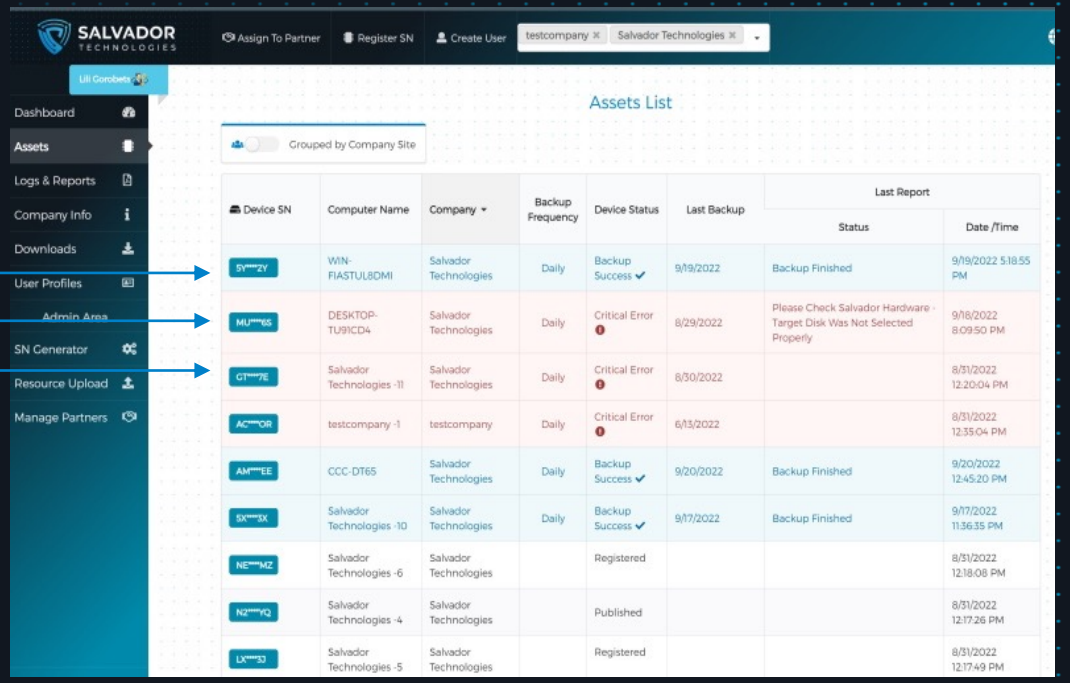
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Full Visibility

Single-point reporting of the Backup status

- OK
- Report missing
- Attack detected
- Hardware Alert



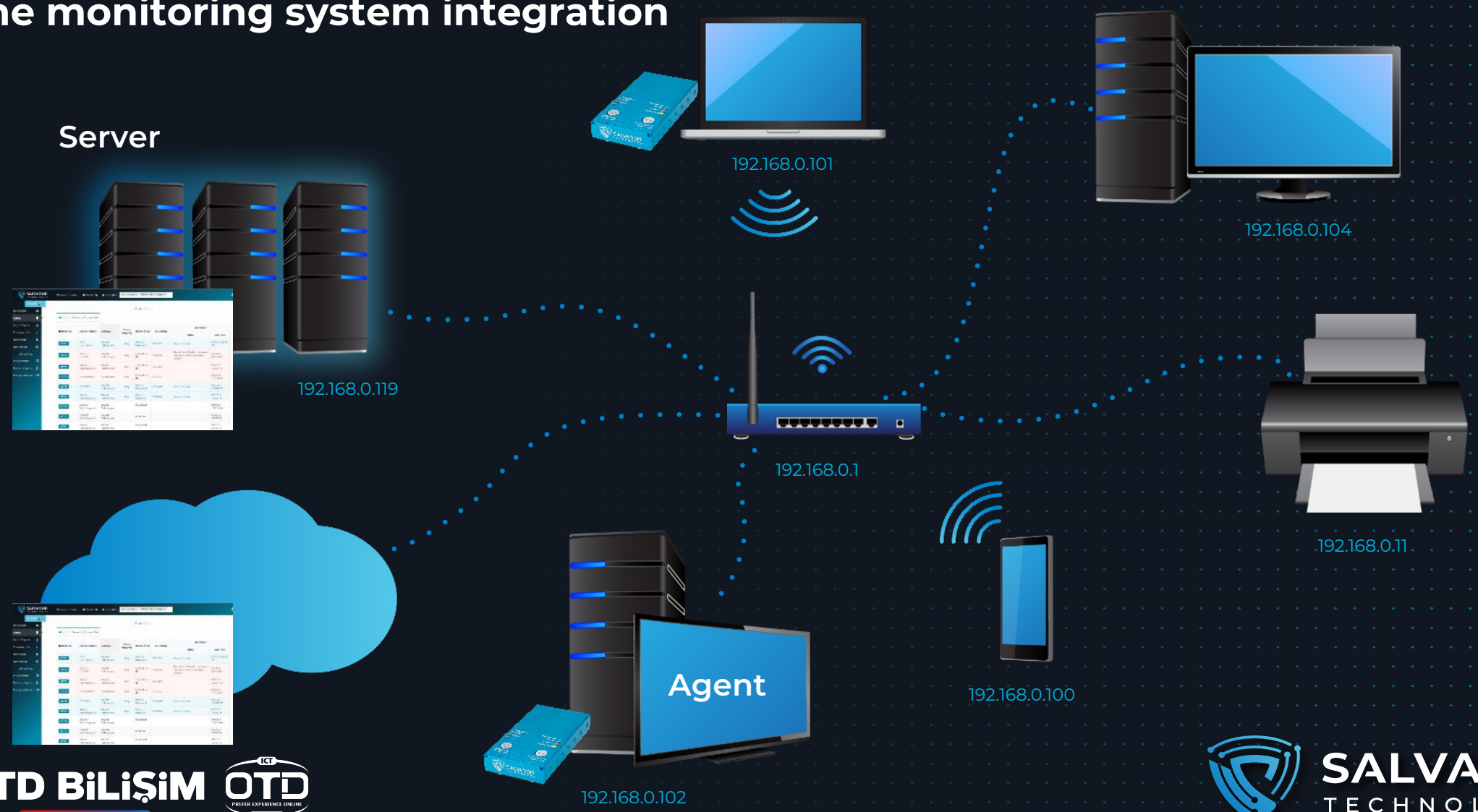


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Computer System Environment

The monitoring system integration



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PATENTED

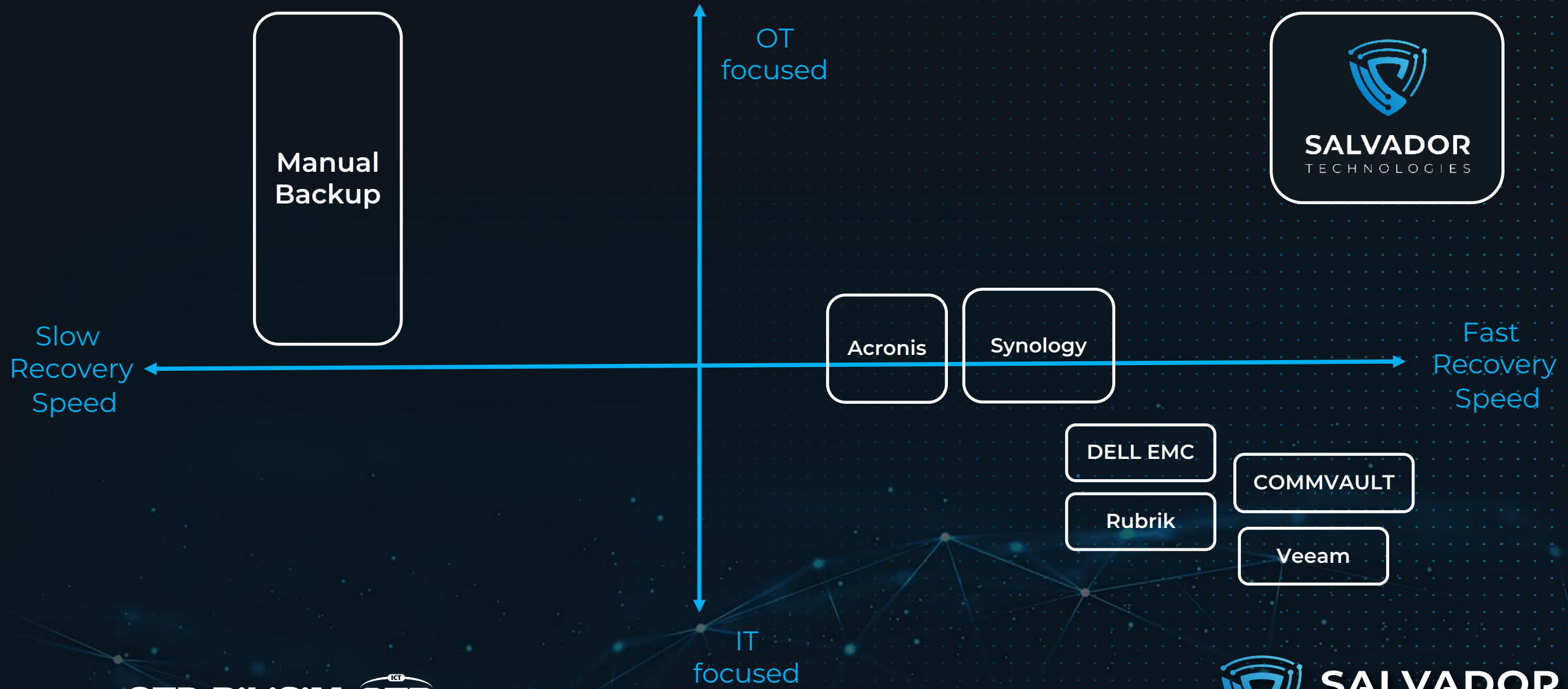
Our data loss prevention tools are easy to use – less than **1 minute of installation** in order to protect the data from malicious encryption.

It requires only **30 seconds** to return the system back to work in case of a cyber-attack or system malfunction.

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Competitive Advantage



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Join our fast-growing customer base in Europe and the US



Manufacturing



Medical



Logistics



BMS



Critical Infrastructures



Energy



Maritime

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Manufacturing Chemicals

Global mineral and chemical manufacturers, providing Magnesium, fertilizers, Bromine for agriculture and food industry. Compounds including potassium, phosphates, and calcium used for various applications. The factories operate hundreds of HMI stations and servers to support the manufacturing of tons of agricultural products distributed worldwide.

The Need

Securing the continuity of operational servers responsible for management of the manufacturing processes, such as resource planning, monitoring, configuration, and real-time hazard recognition.

Backup of Engineering workstation: Real- time Plant Control, product and operations traceability, Inventory Management.

The Solution

Deployment of Cyber Recovery Unit (CRU) on critical end-points, centralized servers responsible for ongoing operations of the factory. The CRU backups whole server with several virtual machines (VM) running on Windows 2012 Hyper-V platform.

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Maritime The Ashdod Port Company

Ashdod Port, Israel's largest sea port cargo volume and is a major gateway for goods and cargo to and from the State of Israel, has started operations in 1965..

The Need

An alternative to the previous manual backup method which required physical access to each crane station. Efficient and Frequent backup of all operational systems of configuration updates for all end-points

Operational Continuity of Critical equipment – various types of cranes, including legacy systems.

The Solution

One-time physical installation on the crane station, providing automatic frequent backups.

Deployment of Cyber Recovery Unit (CRU) on critical end-points: ABB HMI terminal crane computer systems

based on Window 10, and SIEMENS Window server 2012 with SIMOCRANE CMS (Crane Management System).

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Logistics

- **UPS logistics center** Stand-alone computers managing the critical operation of packaging sorting. Computers are not monitored and are not secured. If it stops working, hundreds of packages will be delayed in the delivery **[10 units]**

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B.M.S

- **Building management system** of large datacenter facility: The servers which responsible for the operation of cooling systems, access control, elevators **[10-50 units]**

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Critical Infrastructures

- **Ammonia refrigeration system** in case of downtime the operator needs to manually monitor dozens of end-point controllers. **[10-20 units]**
- **Water Supply Plants** HMI (SCADA) server that monitors water quality and controls the water treatment of densely populated areas in Israel **[3-5 units each plant]**

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FAQ

Why is your recovery so fast?

Our advanced backup software creates a full duplicate of the system, which includes the OS (Operating System), data files, drivers, and the unique user configuration. The attacker cannot reach, encrypt, or delete the data, as it is secured by air-gap protection. This allows the user to immediately reboot and operate from Salvador's disk, with no need for IT expertise, by one click of a button.

Any solution for petabytes of data storage ?

Most of the critical assets can use our Cyber Recovery Unit (CRU) units for immediate recovery. For large capacity servers and private cloud, we have the Network Recovery Station (NRS) based on the DPU network adapter. This product is not limited by the capacity of your data.

How do you avoid a backup of the virus?

We do continuous monitoring of the data of both the computer and the backups data. This allows us to immediately identify attempts of attacks, and inform the user to take an action.

How do I perform recovery exercises for my company?

It is easy and will not require you to shut down your workstation. All you need to do is to plug off the unit from the workstation and then you can test the recovery process on a different computer (by booting from Salvador device, the whole process takes approximately 30 seconds).

How do you deal with an APT virus ?

One copy of the data is never accessible before recovery to avoid APT virus infection. The two other copies are secured by a patented offline protection algorithm. Access to the data in those copies is time-limited and allowed only to dedicated Salvador software. The disks are invisible by the OS.

How does it differ from a DR system?

Yes. DR (Disaster Recovery) is designed specifically for data loss in cases such as fire, water, physical theft. These are usually online solutions that are vulnerable to cyber-attacks. Salvador's solution is based on air-gapped protection storage to allow recovery from ransomware, wiper malware, and other types of cyberattacks.

I have many end-computers in my organization, how can I deploy your product?

The deployment is very easy. The installation takes less than one minute per station. It means you can deploy hundreds of systems in a few hours.

How do I perform a backup validation?

With our simple-to-use web monitoring system, you can see the status of all workstation in one management panel on the cloud or on-premise (in case no internet connection exists).

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Meet Our Team

The Salvador Technologies team is composed of 11 highly experienced professionals, each in their own discipline, mission-oriented, and with great interpersonal skills!

The entire team is committed to Business Continuity Planning and shares the passion for contributing to the global cyber security agenda.



Alex Yevtushenko
CEO
Electrical engineer, specialization in VLSI and computer engineering



Oleg Vusiker
CTO
Electrical and electronics engineer with vast experience in the National Cyber Unit



Amos Halfon
VP Sales EMEA
29+ years of experience in Hi-Tech sales and building global markets.



Sharon Caro
Marketing Executive
15+ years of experience in business development, branding, and global strategies



Ariel Maislos
Serial Entrepreneur & Investor (Anobit)



Prof. Hezy Yeshurun
Co-Founder @ ForeScout
Prof. Emeritus @ TAU



Bruno Darmon
VP EMEA Sales
@ Check Point



Gabriel Marcus
Cyber Architect
@ Bank Discount

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T: +90 216 912 10 05

otd.salesgrp@onlineteknikdestek.com

www.onlineteknikdestek.com