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# INVICTA

- Invicta was established in 2008 by Dr. Attila Özgit, Dr. Onur Tolga Şehitoğlu, and Prof. Dr. M. Ufuk Çağlayan.
- In collaboration with ASELSAN, we develop high-security technologies that meet both indigenous and international standards. By providing tailored solutions for the requirements of critical institutions, we are positioned as a trusted partner in the fields of cybersecurity, data transfer, and system isolation.
- With our highly qualified expert team, we add significant value to projects of strategic importance.

# PRODUCT PORTFOLIO

## VAG

It is a system solution, approved at Common Criteria EAL4+ security level, that enables secure information exchange between networks with different security levels for the execution of 'Mission Critical' operations.

## MiniVAG

MiniVAG offers the "Virtual Air Gap" technology, which is dual-patented by the USA and Turkey and ensures secure information exchange between networks with different security levels, in a single box.

## VEGS

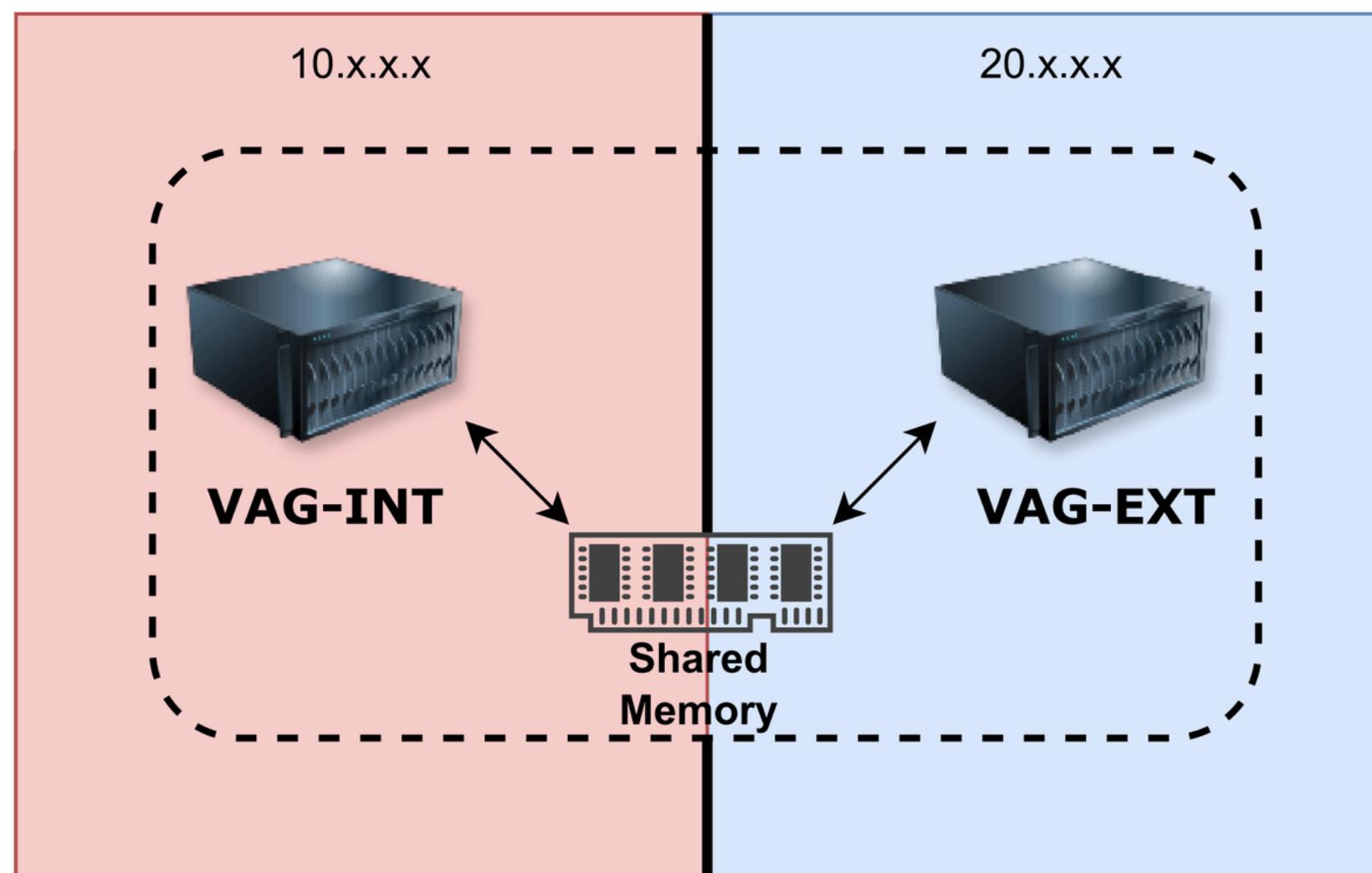
VEGS is a NATO-compliant security solution designed for the secure processing and circulation of electronic documents (txt, pdf, etc.) across different internal and inter-organizational classification level networks.

## e-SBSL

e-SBSL is a next-generation security ecosystem built on the power of the e-signature

# VAG/SAHAB

## Next-Generation Network Isolation Technology



### Separate Your Environments:

- Transforms your critical systems into an isolated "island," shielded from the public internet or lower-trust zones.

### Zero Trust Architecture:

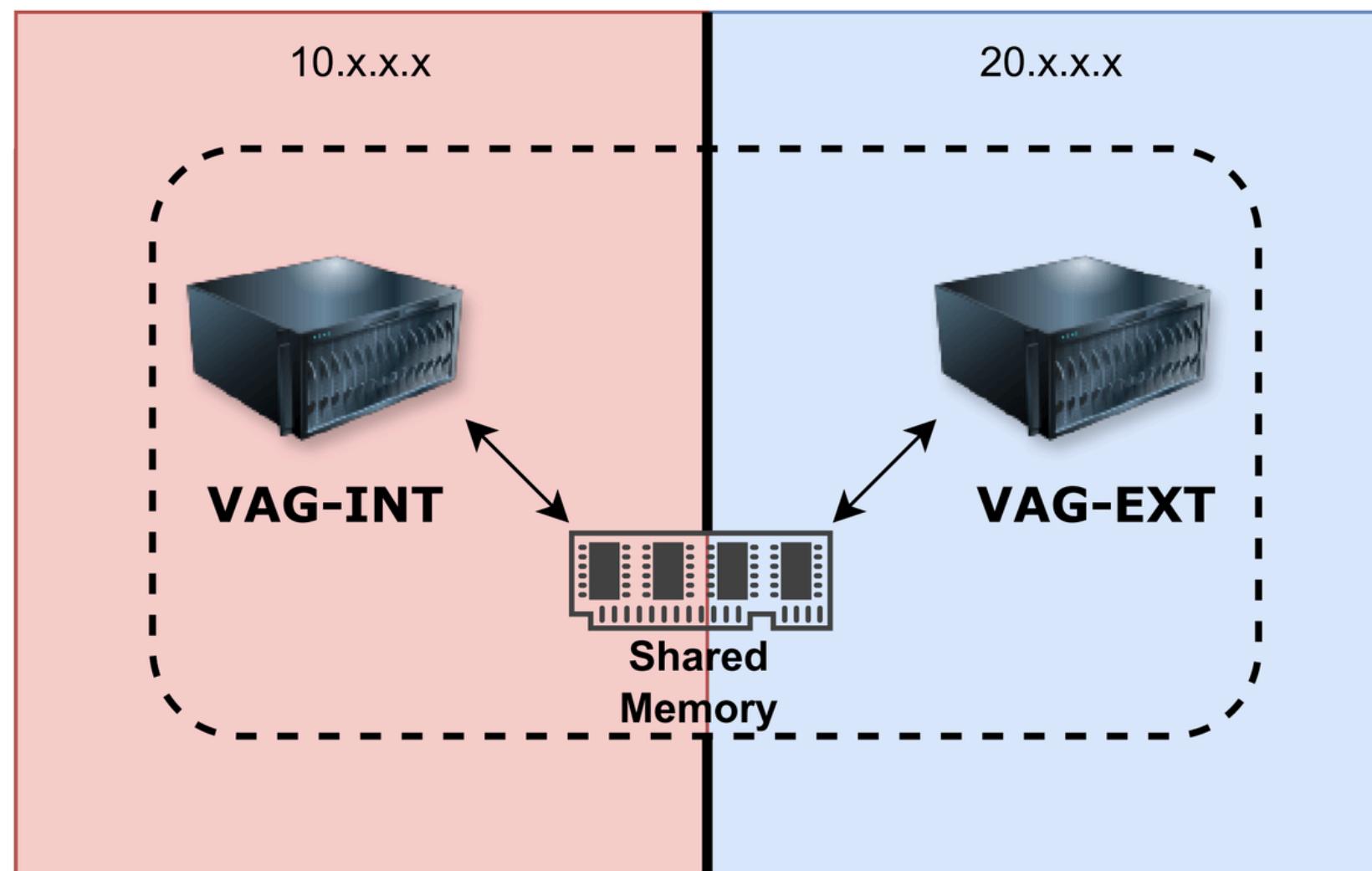
- By eliminating any direct connection between networks, it renders potential breaches physically impossible at the hardware level.

### Controlled Bi-directional Exchange:

- Unlike traditional one-way data diodes, it enables secure, rule-based, and bi-directional data flow without compromising isolation.

# VAG/SAHAB

## Why VAG?



### Firewall Vulnerabilities

- Firewalls primarily perform packet filtering; however, they remain susceptible to bypass via zero-day attacks, configuration errors, and sophisticated tunneling techniques.

### Data Diode Limitations

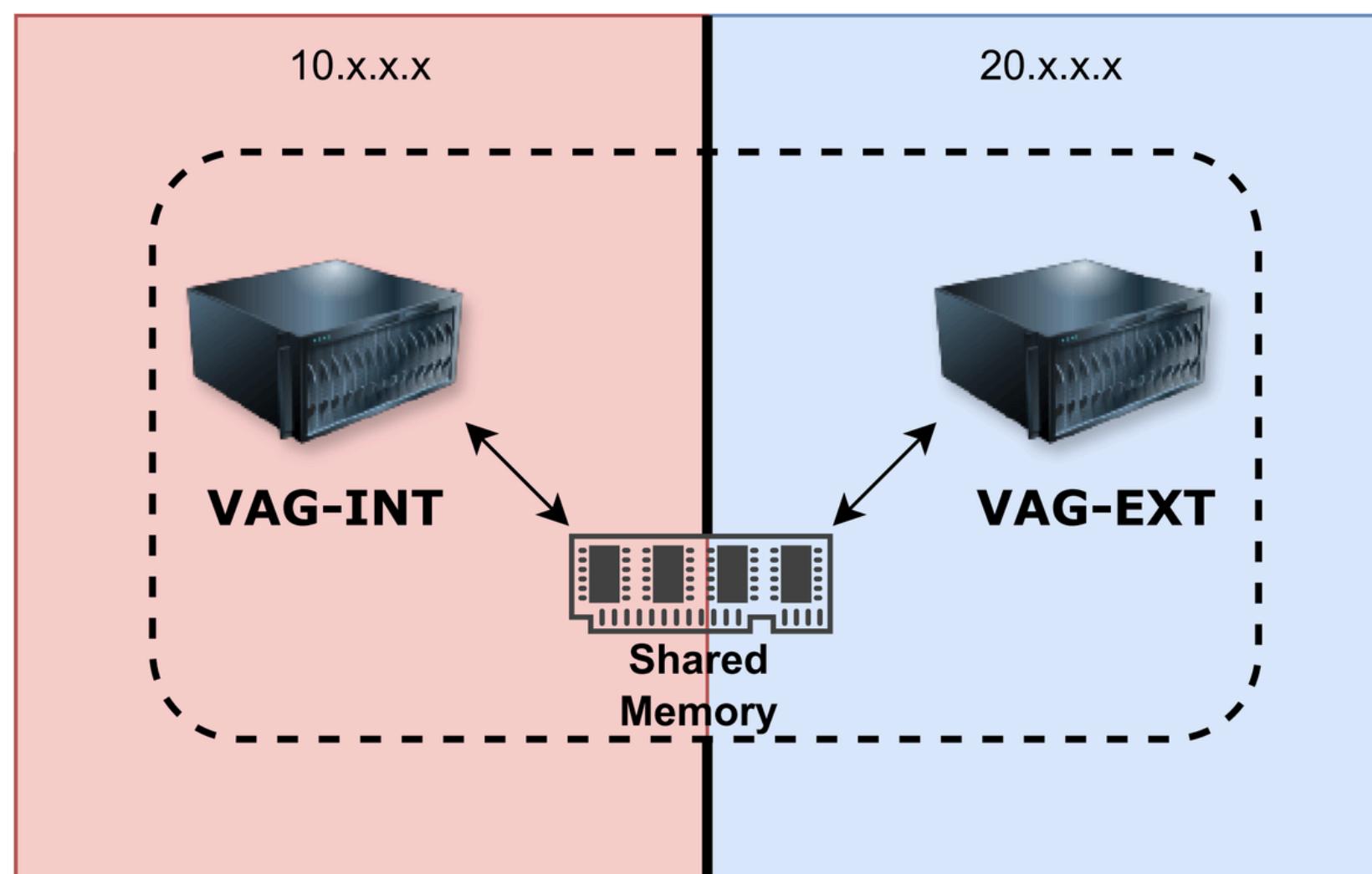
- Traditional data diodes are strictly unidirectional. They lack support for data verification (ACK), cannot guarantee file integrity, and often obstruct modern integrations such as APIs and Database (DB) synchronization.

### The VAG Advantage

- VAG provides robust isolation at the network level while ensuring seamless service continuity at the application layer.

# VAG/SAHAB

## Field-Proven Security



### Deep-Rooted Reliability:

- VAG has been actively and securely deployed for many years within the defense industry, military entities, and public institutions.

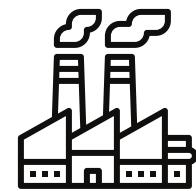
### Mission-Critical Success:

- With a proven track record in mission-critical environments, VAG serves as the guardian for the most sensitive and classified data.

### Rigorous Testing & Exercises:

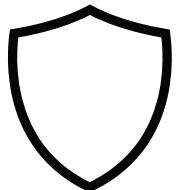
- It has successfully passed numerous rigorous cybersecurity tests and field exercises conducted by high-level authorities, including NATO and the General Staff.

# VAG Use Case Scenarios for Critical Infrastructure



## OT/IT Segmentation:

- Secure isolation of SCADA (plants/factories) from corporate networks.



## Classified Networks:

- Controlled data transfer between different security levels.



## Web Service and Database Security:

- Secure access for public-facing servers to internal databases.



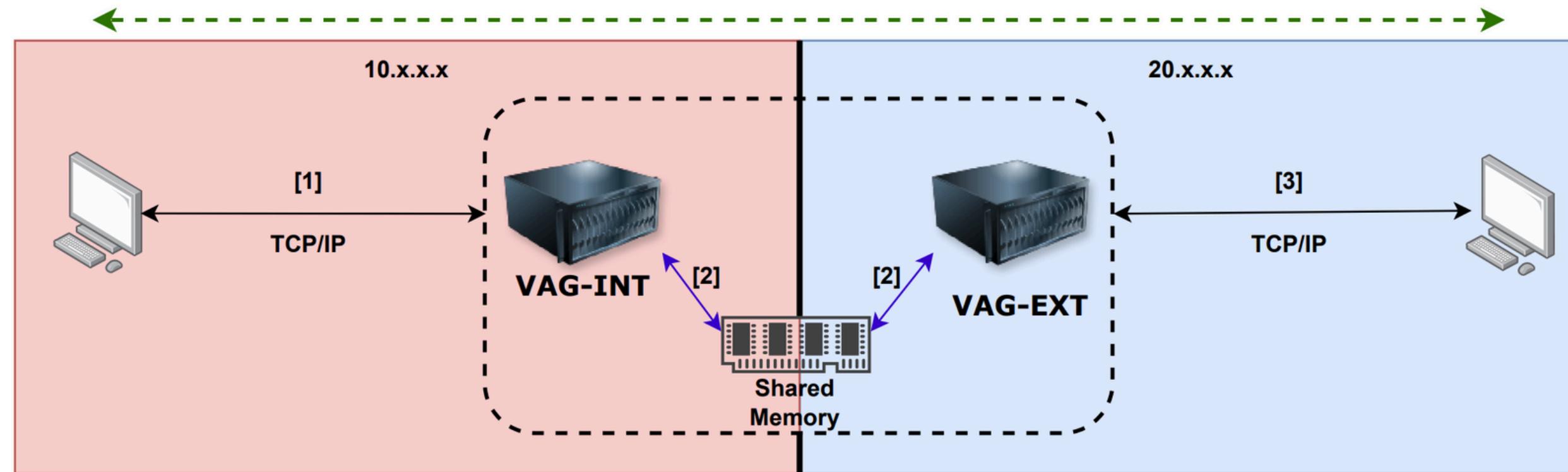
## Finance Digital Assets:

- **Banking:** Total isolation of **Core Banking** and **SWIFT** from the internet.
- **Crypto Custody:** **Air-gapped** transaction signing between Hot and Cold wallets.



# HOW DOES VAG WORK?

## Protocol Break and Session Termination



### Dual-Server Structure:

- VAG consists of two physically separated independent servers (Internal and External Server).

### Session Isolation:

- Example: A TCP/IP session originating from the outside world is terminated at the "External Server." No direct connection is established to the internal network.

### Proprietary Messaging Protocol:

- Data is transferred between servers via Invicta's proprietary protocol, which is immune to external manipulation.

### Full Sterilization:

- Data transfer between the two networks is achieved through raw data, not "network packets."

# MINIVAG

## "VAG Security, Now Everywhere"

### **Compact Design, Robust Protection**

- VAG technology in a set-top-box form factor; fits any desk or cabinet without taking up space.

### **Same DNA, Same Performance**

- Retains the exact high-security architecture and military-grade software standards of the flagship VAG.

### **Engineered for the Field**

- Cost-effective, plug-and-play gateway for remote offices, branches, mobile units, and temporary workspaces.

### **Absolute Isolation**

- Dual independent internal servers sever physical links between networks, making breaches impossible.

# VEGS

## **NATO-Standard Classification**

- Auto-labels and digitally seals sensitive files (PDF, Office, etc.) based on international security standards.

## **Zero-Trust Insurance**

- VAG integration physically blocks accidental leaks to unauthorized zones, completing your Zero Trust strategy.

## **Secure Workflow**

- VEGS and VAG work together to physically stop the leakage of critical data to lower-security networks.

# E-SBSL

## "E-Signature Meets Cyber Defense"

### Integrated Cryptographic Defense

- A unified software suite centralizing file encryption, secure mailing (PGP), and hardware-backed key management under a single secure architecture.

### Passwordless & Verifiable Identity

- Eliminates vulnerable passwords by utilizing e-signature devices as non-clonable digital keys for enterprise logins and API authentication.

### VAG Integration

- Seamlessly integrates with VAG to provide cryptographic proof of sender identity and data integrity for all network traffic, preventing spoofing and forgery.

# REFERENCES

**aselsan**

 ODTÜ  
METU

 HAVELSAN

 CTEI

**TAI**



 **STM**<sub>25YIL</sub>  
MÜHENDİSLİK | TEKNOLOJİ | DANIŞMANLIK





# THANK YOU

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