6th of February 2024

# RENDEZ-VOUS AUTOUR DE VMS

**Report on Rendez-vous autour de VMS,** February 6, 2024**.**

On Tuesday 6th of February , we held another "Rendez-vous autour de VMS" zoom conference, focused on security. We welcomed three partners: **Imperva**, publisher and supplier of cybersecurity services and a subsidiary of Thales, **Commvault**, publisher of data protection solutions, and **VSI**, which presented security updates and its forthcoming CEO.

The speakers made a special effort to express themselves in French, so that our members could understand them better, and we'd like to thank them in particular.

All these presentations are available on the association's website:

https://www.vmsgenerations.fr/rendez-vous-autour-de-vms-du-6-fevrier-24/

# Overview on these presentations

**Imperva** :

- European *NIS2* directive and consequences, its schedule, obligations, reporting and penalties.
- Services to support companies.
- Data protection and *SQL/NoSQL* requests analysis.

**Commvault** :

- VMS product offerred (previously Legato).
- Advanced processing on backup without production impacts: behavioral analysis/AI, local storage *onPrem* or *cloud,* security trigger with “honey pot” feature.

**Heptapod** news:

- Software Forge based on *Git/Mercurial* supported natively on VMS.

**VSI** :

- News on Security updates
- Presentation by the new CEO with recommendations and resources to migrate to x86.
- Exchanges on *hobbyist* licences and Open source contributions.

# IMPERVA

## EU Network & Information Systems Directive (NIS2)

**Mohamed Lallouch**, Data Security Specialist

Mohamed Lallouch, Data Security Specialist at Imperva, presented the European NIS2 (Network & Information Systems) Directive. It revises the previous version adopted in 2016. The aim is to improve the cybersecurity capabilities of networks and information systems in view of the increase in attacks. This new directive extends the previous one, covers more industry sectors and introduces new risk management and incident reporting obligations. Adopted in January 2023, the 27 EU member states must transpose the directive into their national laws by October 2024. The previous NIS Directive had been translated by several texts into French law, including the cyber section of the 2018 Defense Programming Law.

The directive classifies organizations as essential or critical. Cybersecurity and incident reporting obligations have been tightened. Penalties for non-compliance are rising sharply, up to €10 million or 2% of annual turnover.

The NIS Directive already considered the following sectors as essential: healthcare, transport, digital infrastructure, water, banking, financial markets and energy. NIS2 adds digital service providers, waste management, pharmaceuticals and labs, space and public administration. The new Important Sectors category includes communications providers, chemicals, food production and distribution, manufacturing, social networks and online marketplaces, and postal services.

Technical, operational or organizational measures to manage cyber risks include risk analysis, incident management, business continuity, procurement, system and network security, training and HR, cryptography and multi-factor authentication to prevent or minimize the impact of incidents on users.

Incidents must be reported within 24 hours, with further analysis provided within 72 hours, followed by a final report with the incident, its root cause and control measures within the next 72 hours. Penalties for non-compliance can reach very high levels, and in the case of essential entities, the supervisory authority can force certain measures or even suspend those responsible for non-compliance...

Considering these new or reinforced obligations, Imperva offers a range of services to support companies and help them implement the appropriate tools and methods. Data security need a very specific focus, and our understanding of SQL and NoSQL query languages enables us to provide a detailed analysis of threats and incidents. Technological solutions in the crypto and MFA fields are offered in conjunction with other Thales Group entities for identity, data and application management.

Imperva was founded in California in 2002. Its cybersecurity offer covers the protection of applications (Web Application Firewalls), APIs and data.

The company was integrated into the Thales Group after its acquisition in 2023 in the cybersecurity branch, complementing its identity management offerings. This is Thales's second biggest acquisition after Gemalto.

# COMMVAULT

**Commvault : Solutions for protecting data on VMS** **Sébastien Weber**, Senior System Engineer

Commvault

OpenVMS integration

Typical architectures

Combining SaaS and on premises solutions

For 27 years

Backup = the last line of defense against cyber attacks.

Early detection of threats

Long-standing cloud approach, customer data can be exported to major cloud providers

Certified FedRAMP high. FedRamp is a set of cloud security rules for suppliers to US government agencies.

Strong R&D activity (active patents and new registrations, R&D spent = 30% of revenue, 1/3 of workforce)

A single interface that covers all uses, historical, on premises and cloud.

Includes protection against ransomware.

Agnosticity and portability: restore on one platform a backup from another (DB, virtualization, onprem/cloud)

Cleanroom Recovery test in the cloud for analysis of malware, backdoors, etc.

A single interface for the entire IS, so all backup is centralized.

Can be used in OnPrem, SaaS or appliance mode.

New: ThreatWise/cyberdeception: emulation of decoys or objects attractive to an attacker, old OS, connected objects... to trace attacks.

Risk Analysis: identification of redundant, obsolete, or trivial data.

Reduce duplication, archive old data, delete data that doesn't need to be saved. The aim is to reduce backup time/window.

Scanning/indexing for sensitive data (e.g. subject to RGPD) to better protect them.

Who accesses what? Control of access rights.

These processes and analyses are carried out on the backup, without disrupting production.

SecurityIQ dashboard: security scoring for each update

Ransomeware protection: no user access, only commvault can access data. Behavioral analysis (AI/ML) of activity.

Auto Recovery: DRP management, replication to remote site, target change (HW, VM, cloud provider), DRP test in isolated bubble.

Threat scan: rereading of backups with up-to-date antivirus, AI analysis.

Classic Backup & Recovery. Air gapping isolation, encryption key & password management

Integration with OpenVMS

2-tier or 3-tier architecture: control plane/command center, data plane (which transports data), storage. Hyperscale X appliance. Proxy system (Linux) with filesystemCommvault interfacing with VMS. Small agent on VMS. Proxy performs deduplication. Once data is in Commvault format, it can be copied/duplicated to any media.

VMS license based on volume of data backed up.

VMS versions supported/required: HP Itanium 8.3, 8.4. VSI Itanium 8.4-2 & L1 with HP TCP/IP stack.

Full restore: basic OS installation required before restoring data backed up by Commvault. For Linux, Windows and VMs, Commvault provides minimum boot images.

New HTML5 console interface replaces Java.

Interactive definition of system access on the VMS server, declaration of access node (proxy system) and backup plan. Full or file restores, optionally cross-referenced.

Architecture :

Local or on premises, multicloud or hybrid-cloud storage. Control plane (commserve) can be multiple. User interface, physical or VM, on Windows or Linux. Data Plane: media servers/media agents, multimachine global block-level deduplication, NAS, SAN, Object and tape targets.

Illustration with multisite example + outsourcing to cloud providers that speak S3 or Commvault AirgapProtect on Azure.

Security: production + honey pot decoys

Proactive anomaly detection. Live scan of changes + post-backup antivirus check.

In the event of an anomaly, transmission of the last clean backup.

Integration with SIEM / SOAR security managers.

Immutable storage / airgap (firewall) with remote CyberVault. TreatScan: cleaning threats from backups.

Founded in 1988 in New Jersey, Legato Systems became Commvault in 1997. From the outset, the company has offered solutions including VMS as part of its cross-platform backup, disaster recovery and archiving offering.

Q/R: Backups have become a priority target for cyber/ransomware attacks.

VMS/x86 support: will be treated like any other VM directly at hypervisor level.

# HEPTAPOD News

### Georges Racinet

Version 1.0 of Heptapod, based on GitLab and adding Mercurial support, is out today.

A software forge based on Git or Mercurial, with native Mercurial support on VMS.

More details at *https://heptapod.net*

# VSI

### Adam Hoff Nielsen (Sales Director Emea)

Adam Hoff Nielsen focused on security issues and recent updates.

The key points addressed were:

- a reminder of OpenVMS's historical security credentials

- a general security initiative is underway at VSI :

    - for HITRUST certification is targetted in spring
    - CVE reporting program
    - partial NIST-2 compliance
    - study for ISO 27001 certification

- in terms of products

    - survey on backup role

- ACME agent to integrate MFA solutions in v9.2-3
- in v9-2 OpenSSH 8.9 configurable during OpenVMS installation; OpenSSL 3.1 with FIPS module

He went on to point out that applications that depend on SSL111 must switch to SSL3, as there will be no more updates for SSL111.

Regarding VMS, Adam indicated that "any future VMS security updates will be available on historical versions (Alpha, Integrity) during their support period according to our roadmap (see https://vmssoftware.com/about/roadmap/), as well as on the x86 version".

For all these reasons, VSI recommends moving to x86 as soon as possible.

### Darya Zelenina

Adam then left the floor to Darya Zelenina, the new CEO, whom he introduced as technically capable of leading VMSsoftware into the future, in Europe and who speaks French.

Darya Zelenina, the new CEO of VMS software, will take up her position in June. She is already well known to French users, having given a presentation on training at the VMS anniversary and made contact during the first bootcamps with VSI.

Significant fragments of her communication

*"It's a real pleasure to be here with you. I would like to emphasize the exceptional value that VMSgenerations brings to our global community of users."*

She joined in 2017, and has led numerous projects on training, documentation and marketing.

She was country manager for 3 years in Russia.

She has been at the forefront of internal changes aimed at modernizing the company, facilitating business interactions, fostering knowledge transfer and operational continuity.

Her priority: to help customers migrate to x86 by providing them with the tools, the necessary infrastructure and ensuring that OpenVMS works perfectly in this environment.

We can no longer rely on Alpha or Integrity servers, it's imperative to migrate to x86 as soon as possible.

Darya then moved on to a presentation of methods, resources and recommendations for porting to x86

We need to start inventorying as soon as possible.

VSI preparation resources:

- VSI$SUPPORT script,
- Application Evaluation checklist.
- Form to be returned for an assessment of complexity and cost.

Documentation is provided by VSI, to better address configuration instructions on various hypervisors.

Wiki article / "x86 porting considerations": points to check in the code, article open to contributions from the community.

- Recommendation: Use IDE plugin (highlighting, debugger, source management).
- Recommendation: Need for test sets.
- Post migration: set up production environment, migrate data. Maintain an original backup environment during the observation period of the new production.

Key elements of a successful migration, according to testimonials:

- Up-to-date application,
- the team is familiar with the application and its dependencies,
- management supports the migration and understands the difficulties

If help is needed: contact VSI for a free discovery service.

*"X86 is the future of VMS, so the sooner you start thinking about migration the better. We're sharing links to all the resources to help you. We look forward to helping you with your migration".*

# Discussions at the end of the session

Following : Q: Question; A: Answer

HF: Homi Faris

DZ: Darya Zelenina

MS: Miroslaw Szczeblewski

GC: Gérard Calliet

### Q: Examples of migration to x86?

**A VSI**: Yes, a few customers in the discovery phase have started but not finished migrations. Some partners have completed their migration. For example, Mimer, a Swedish database ISV, has completed its migration.

**A: HF:** Yes, around 80 to 100 customers in the evaluation, test or migration phase. They access VSI support via the service portal, with a quick engineering link.

Around 1,500 open calls to date on migration issues.

### Q: What's the geographical breakdown?

**R HF:** Almost everywhere, in line with the installed base of customers.

### Q: Specific types/profiles?

**A HF:** Evenly distributed. Lots of partners. A lot of Oracle calls...

Tools :

Script VSI$SUPPORT + Questionnaire to be returned to VSI.

Then meeting with VSI to review porting process and issues to be addressed.

### Q: What about customer experience forums?

**A VSI**: The VSI forum is open to this if customers want to talk about it.

*[ https://forum.vmssoftware.com/ ]*

**R VMSgenerations**: a question raised with Adam, the first step is to have customers who have migrated, then we can present their experience. Probably in the 2nd half of the year.

### Q: How many hobbyist licenses are there?

**A VSI:** Evaluation licenses [for x86 porting, editor's note] are complete, with x86 testing and the ability to open calls with VSI Support. Hobbyist licenses do not allow direct support calls, but users do have access to the VSI forum. If the problem reported is a bug, it will be escalated by a VSI moderator. The forum also provides installation assistance. Many VSI employees (up to the highest management level) respond in the forum.

To request an evaluation license :

*https://share.hsforms.com/1-7usw4WOQtu6JGk9z8gPKAdi37l*

### Q GC: ISV/publisher support: there used to be two options: free/paid with access to support?

**A DZ:** We have an ISV manager who issues licenses. We put the address in the chat [ isv@vmssoftware.com ]

**R HF:** In principle, there's no change, with one part free and the other with support. For x86, if the request for an evaluation license is accepted, this gives access to support via the service portal. To apply for a license, go to the VSI homepage "Apply for a license".

### Q MS: consideration of commercial partners or VMS service providers: is there a program to integrate them to support customers in the transition to x86? Or is it exclusively VSI that does this?

**R DZ:** It's not just VSI that provides support. Anyone can help or support customers in their migration to x86. VSI has experience in this area, but there is no exclusivity.

**A HF**: If a customer has an evaluation license or support contract, a partner can open a call on that customer's behalf if required.

### Q GC: OpenSource, a subject that often comes up in questions to VMSgenerations: as part of porting work, is VSI planning to collaborate with specialists in certain opensource software?

For the time being, this would appear to be difficult, for example on the question of the standard for making the sources of these products available. Is there a long-term plan to encourage collaboration between VSI and external OpenSource developers? VSI should open the door a little more to collaboration.

**R DZ**: Can you explain the type of collaboration you're expecting?

**R GC**: Python example: no collaboration with one of the French specialists (JFP). We ended up with two channels that were moving forward without collaborating. We had problems receiving sources in a standard format. There are now opensource products in the VSI catalog, and it would be great to be able to participate in development as we do with any other opensource. Currently, participation in opensource development related to VMS is virtually closed. It's different from standard opensource. With VSI, the answer is "we don't have the resources to do it". VSI has been around for 10 years... it's time to change that.

**R DZ:** I don't know the whole story here. Our opensource offerings correspond to customer requests. We don't really have any opensource programs as you said.

**R HF:** No change to date. There's still a problem of resources to put a standard opensource environment directly on the net. On the other hand, VSI supports these OpenSources and the price is included in the VMS license. This gives less freedom to allow anyone to modify the sources.

**GC note:** This kind of problem is common to all opensource software, and elsewhere it has never prevented classic collaborative development. Some of the code is being experimented with, and at some point, it is validated. VSI's position is that since VSI supports the code, it is not possible to open it up. This is not a clear opensource position. We have problems convincing younger generations to come to VMS, but when they discover that it's frozen opensource it doesn't help to convince them of the value of VMS.

**R MS**: suggestion: VMSgenerations could describe the directions in which members could offer VSI help.

*We welcome members who would like to support and take part in our actions to join the association and promote important topics for them. We will share a message about this soon.*

*The association's board is always ready to listen to users' views on the topics they would like us to address, and more generally on any contribution, reaction or suggestion to ensure that the association's activities reflect everyone's expectations.*

*So don't hesitate to write to us at:* ***contact@vmsgenerations.fr***