

Webinar: Effektives Vulnerability Management mit Tenable.one

21. / 30. Januar 2025



Cyber Exposure Management with Tenable One

Know Your Risk Before It's Too Late

WHAT IS EXPOSURE MANAGEMENT?

- 1 UNDERSTAND YOUR ATTACK SURFACE
- 2 FIND RISK
- 3 PRIORITIZE RISK
- 4 REDUCE RISK

On Prem & Remote IT

Internet-Facing Assets

Web Apps / APIs

Public Cloud

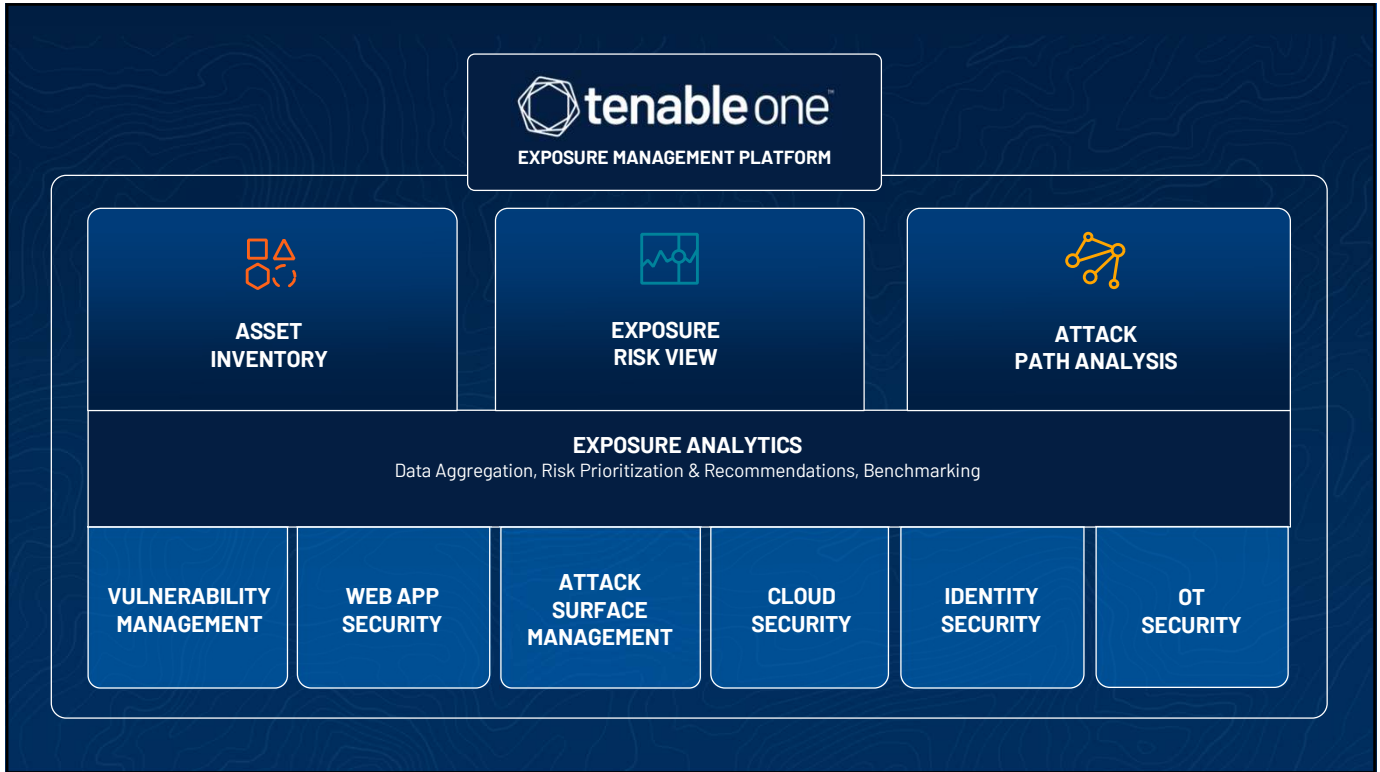
Industrial (OT) Infrastructure

Identity (AD / Azure)




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**Effektives Vulnerability Management
Hintergrund & Vorstellung AVANTEC VM Service**

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Agenda

1. **Initial Situation**
2. **Vulnerability Scanning**
3. **Vulnerability Assessment**
4. **Main Challenge**
5. **Further Challenges**
6. **Get it Done!**
7. **AVANTEC Approaches – Your Support**
8. **Outlook Implementation AVANTEC VM Service**



Initial Situation



IT Operations

Our VM says that a host is vulnerable to **CVE-2013-7488!**
It is a high score

Is this a problem for us? Are there any risks?



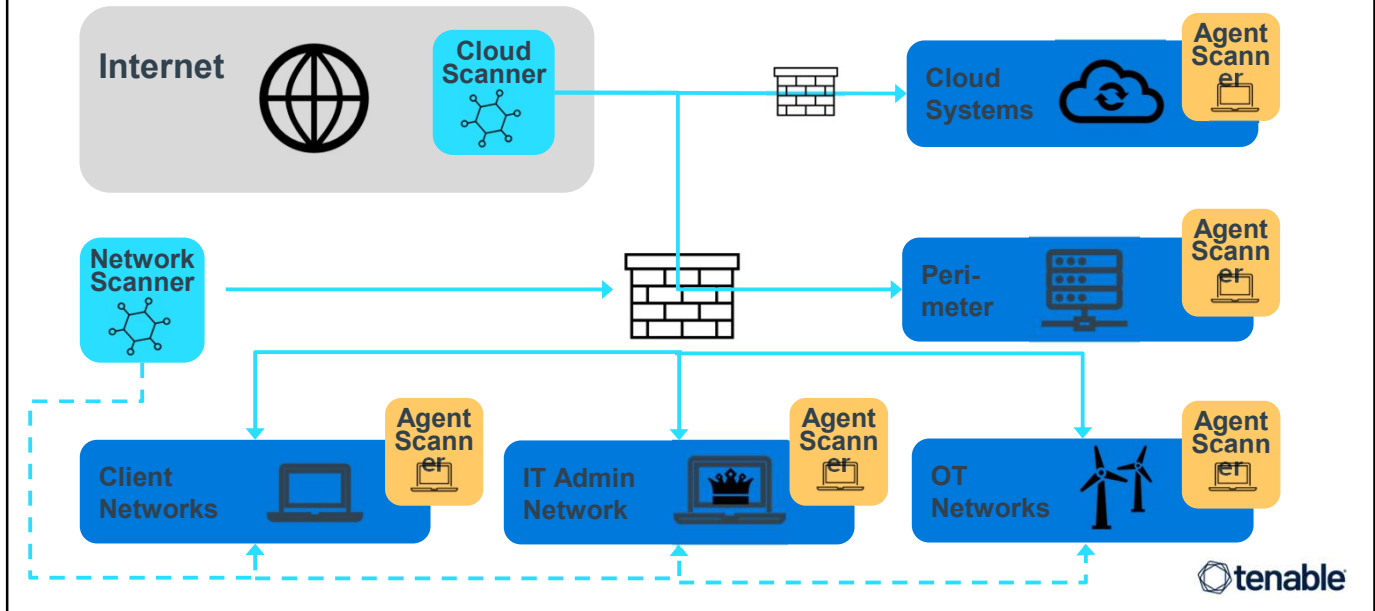
IT Manager



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Vulnerability Scanning – Big Picture



Vulnerability Scanning - Techniques

Network Scanner

- All TCP/UDP ports are scanned
- Identify open ports and services running on scanned systems
- Identify vulnerabilities according enumerated services
- Launch proof of concept exploits
- Advanced: Provide Credentials for authenticated scans

Agent Scanner

- Install agent on host
- Agent scans executable files
- Identify vulnerabilities according identified files
- No information about affected tcp/udp ports
- Configuration aspects are often not included



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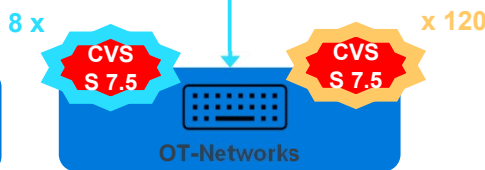
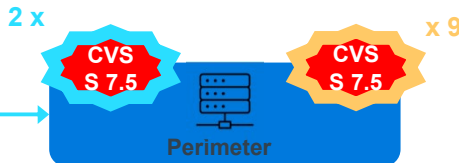
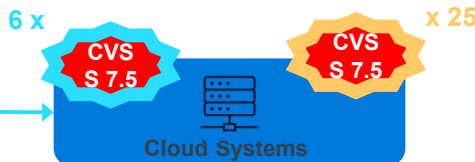
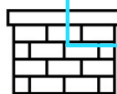
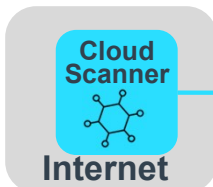
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Vulnerability Scanning – Example Apache Vuln.

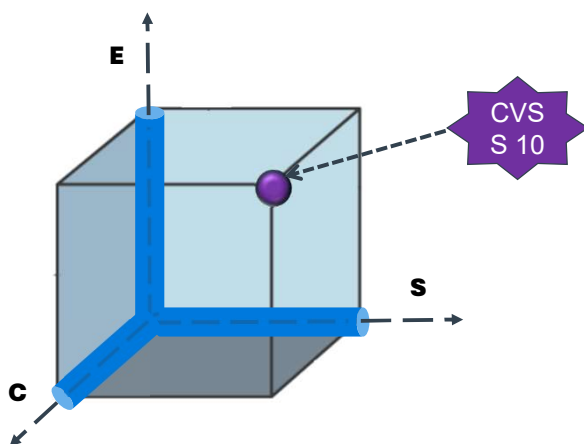
CVE-2013-7488

Base Score: **7.5 HIGH**

perl-Convert-ASN1 (aka the Convert::ASN1 module for Perl) through 0.27 allows remote attackers to cause an infinite loop via unexpected input.



Vulnerability Assessment – Risk of a Vulnerability



The risk of a specific vulnerability is based on three factors:

- E – Exposure within the Network
- C – Criticality of the Asset
- S – Vulnerability Severity

Network Scanner

Good News

All Factors present

Agent Scanner

Bad News


Factor E unknown



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Vulnerability Assessment

 **Network Scanner**

Simple and fast: Vulnerable or not vulnerable

- Sometimes: "Note that Nessus has not tested for this issue but has instead relied only on the application's self-reported version number"

 **Agent Scanner**

Often very difficult do decide if vulnerable or not

- Example: CVE-2013-7488: Can the Perl vulnerability be exploited?
- Additional metrics can help
- At least 10 minutes for every vulnerability



Main Challenge – Facts and Figures

~ 15 **Perimeter Systems** ~ 65 **Workstations** ~ 70 **Servers**

		Perimeter	Clients	Client Services	Client Servers	All Hosts
Active Scanning	Critical	1	0	Not impl.	0	Not impl.
	High	4	0	Not impl.	21	Not impl.
	Medium	2	0	Not impl.	85	Not impl.
	Low	3	130	Not impl.	5	Not impl.
Agent-based	Critical	205	419	N/A*	1'027	1'651
	High	4'212	7'571	N/A	19'877	31'596
	Medium	8'966	3'272	N/A	34'998	47'235
	Low	132	226	N/A	541	899

* N/A = not available resp. not possible to implement



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Main Challenge - Conclusion

Number of Vulnerabilities

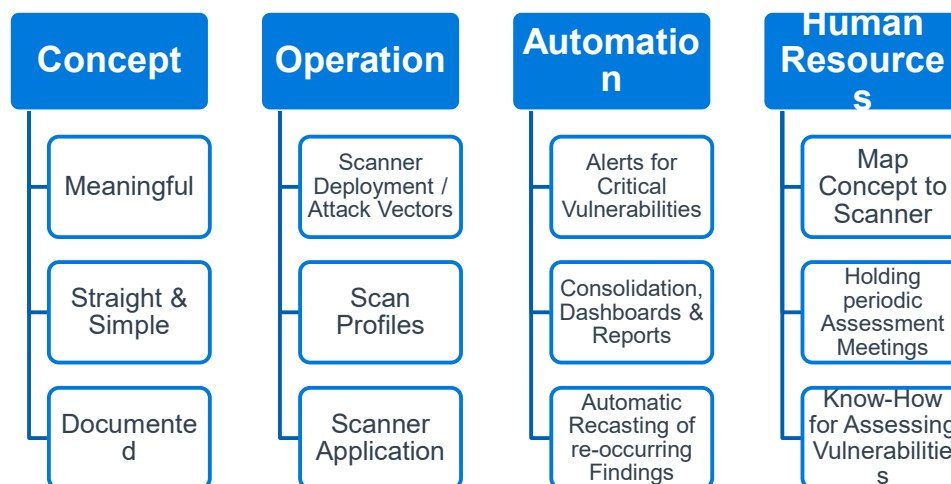
- There are **"few" vulnerabilities** using the **network scanner**
- There are **tons of vulnerabilities** using the **agent scanner**
- There are **tons of "false positives"** for "our" environment using **agent scanner**

Vulnerability Assessment

- Vulnerability assessment for **network scanner** findings is **easy**
- Vulnerability assessment for **agent scanners** findings is **time-consuming**



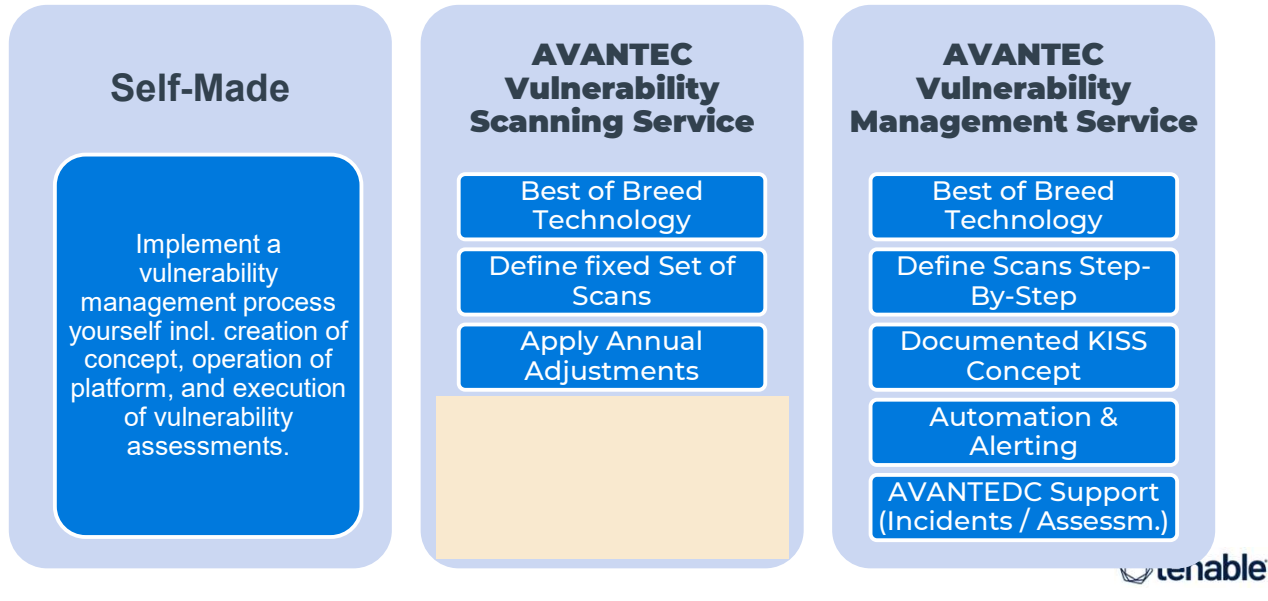
Further Challenges Vulnerability Management



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Get It Done!



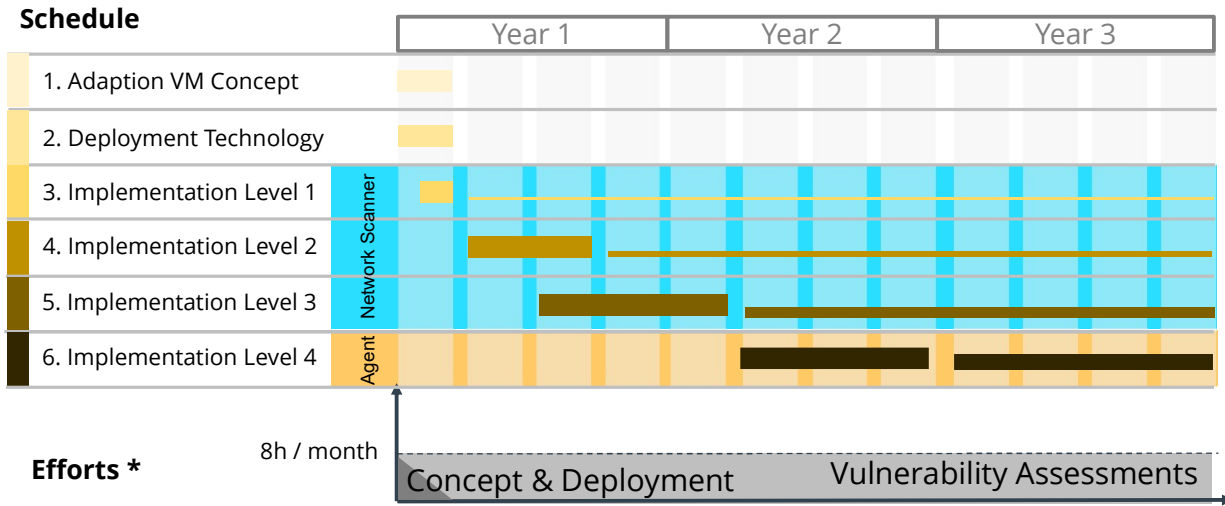
AVANTEC VM Service – Details Key Points



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Service Implementation - Recommendation



* without patch management

