

ERP Security 101: 5 Things Every Leader & Organization Should Be Doing Now What you should be considering while preparing for RISE



Alex Horan | VP Product Julian Rapisardi | Technical Product Manager



## Attacks Against ERP Applications Are Increasing in Frequency and Severity

OF ERP SYSTEMS HAVE BEEN BREACHED IN THE PAST 2 YEARS

2019

**3RD DHS US-CERT ALERT** 

for SAP 10KBLAZE Vulnerability

**PAYDAY** 

Oracle Vulnerabilities

2020 **EXPLOIT TOOLKIT** 

SAP RFCpwn

**BiqDebIT** 

Oracle **Vulnerabilities** 

4<sup>th</sup> DHS

**US-CERT ALERT** for SAP **RECON** 

Vulnerability

2021

**PUBLIC EXPLOIT** SAP SolMan



5<sup>th</sup> DHS

**ALERT** 

activity

**US-CERT** 

on malicious

targeting SAP

0

applications





2012

1st public exploit targeting SAP 2013

**CYBER CRIMINALS CREATING MALWARE** 

SAP targeted malware discovered

2014

**PUBLIC EXPLOIT** 

Chinese hacker exploits SAP NetWeaver

2015

**NATION-**STATE **SPONSORED** 

Chinese breach of USIS targeted SAP

1ST DHS **US-CERT** 

2016

**ALERT** for SAP Business Applications









2018

2ND DHS

**US-CERT** 

**ALERT** 

for SAP

Business

**Applications** 











Critical Vulnerabilities

SAP ICMAD

2022

**US-CERT** 

6th DHS

**ALERT** 





#### **HACKTIVIST GROUPS**

applications

#### 2017

**INCREASED INTEREST ON DARK WEB Onapsis** 

helps Oracle secure critical vulnerability



in EBS



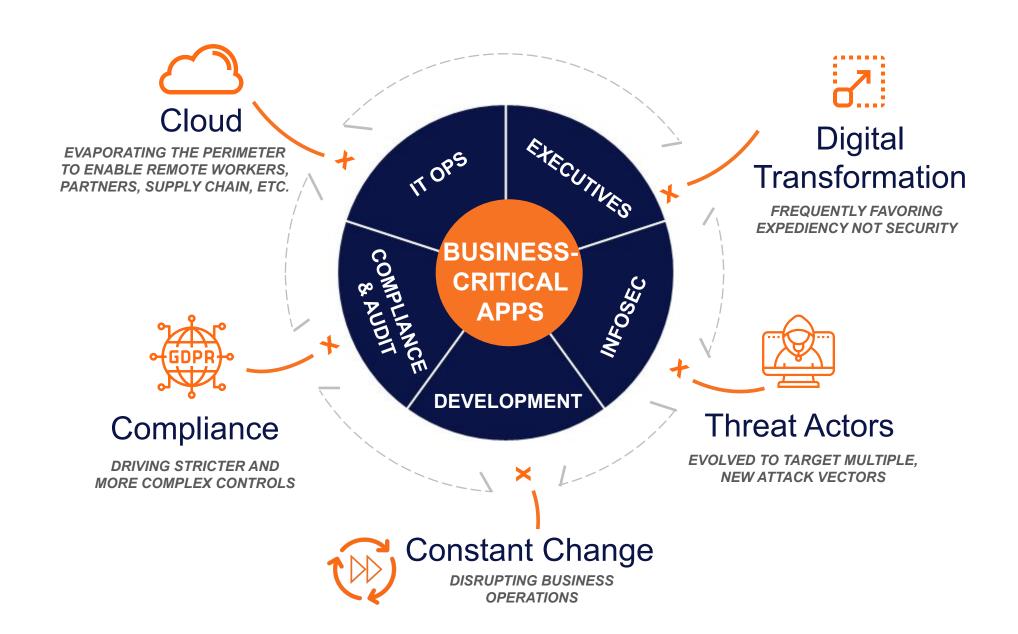








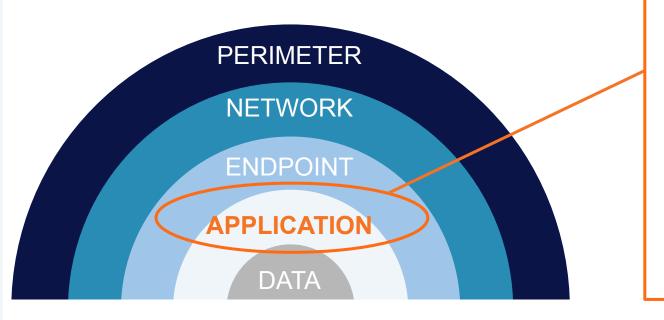
## Modern Enterprises Are Facing a Perfect Storm of Complexity...







# ...And Are Overly Reliant on **Traditional Defense-in-Depth**Models That Surround But Don't Secure ERP Systems



- Attacks on the application layer are the #1 concern of CIOs, YoY
- Over 70% say their application portfolio has become more vulnerable in the past year
- Almost two-thirds of organizations
  have a backlog of app vulnerabilities





# This Means We May Have a Gap with Understanding The **True Risk** to Our ERP Systems...and Our Organization

#### **Vulnerabilities?**

- ERP systems are frequently managed by other teams, with little to no visibility for InfoSec
- More processes moving to SaaS applications
- Increasing reliance on code or apps developed by contracted third-parties

#### **Threat Monitoring?**

- No meaningful monitoring of ERP, with little to no visibility for the SOC
- Reliance on manual log reviews to identify threat activity in ERPs
- No ability to establish compensating controls

#### **Code Security?**

- Security is frequently "bolt on" and not "built in"
- Reliance on manual code reviews
- Problems aren't identified until they hit production





## What Happens If You Don't Fix This?

#### Data Loss or Breach

**74%** Of breaches involved access to privileged account<sup>1</sup>

Of breaches are due to missing application patches<sup>2</sup>

#### **System Outages**

**52%** Of security events caused operational outage that affected productivity<sup>3</sup>

\$50k/

Average cost of ERP application downtime<sup>4</sup>

### **Compliance Findings**

\$5M Average yearly cost of business disruption due to non-compliance<sup>5</sup>

\$2M Average yearly cost of fines and penalties due to non-compliance<sup>5</sup>

#### **Project Delays**

52% Of cloud migrations are delayed due to security concerns<sup>6</sup>

### **Reputation Damage**

7.3% Average decrease in stock price following a security breach<sup>7</sup>

<sup>&</sup>lt;sup>1</sup>Centrify <sup>2</sup>DarkReading

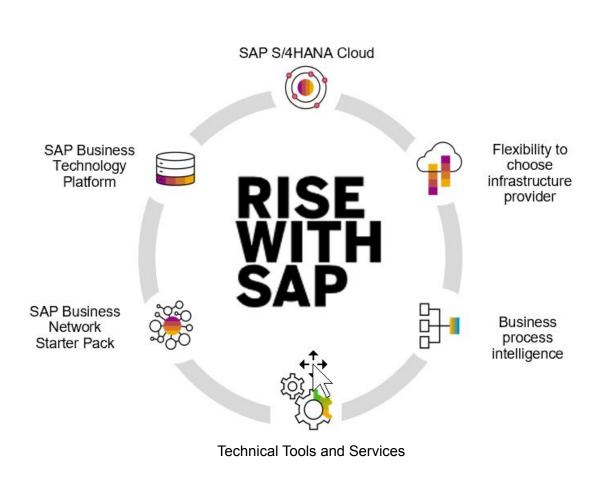
<sup>&</sup>lt;sup>3</sup>Fortinet

<sup>4000000</sup> 

<sup>&</sup>lt;sup>4</sup>Onapsis

<sup>&</sup>lt;sup>5</sup>Ascent <sup>6</sup>TechRepublic

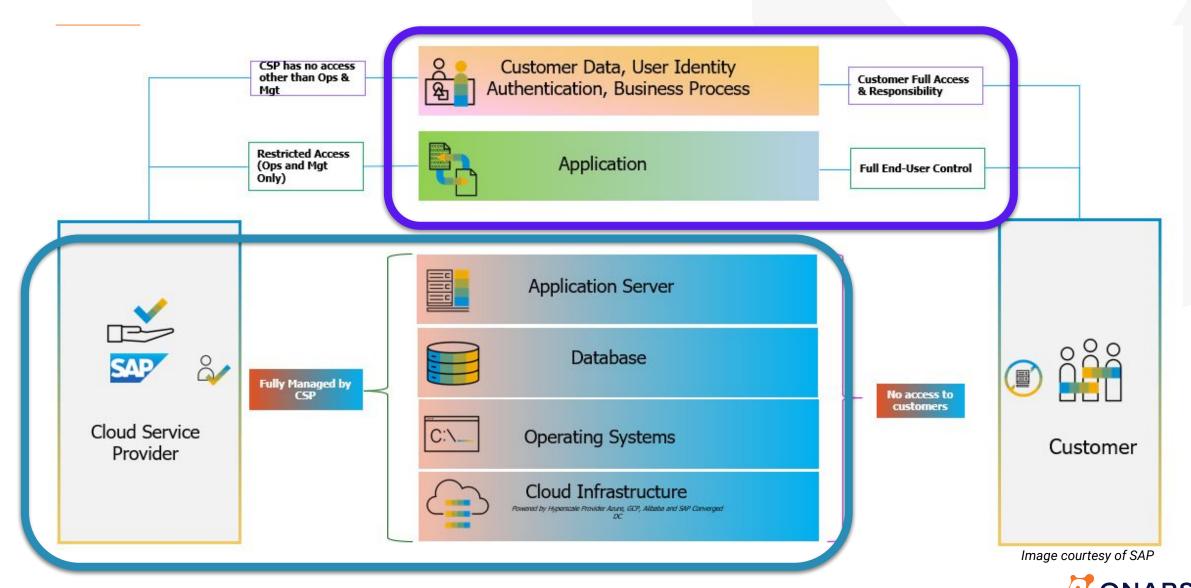
## RISE with SAP: Business Transformation as a Service



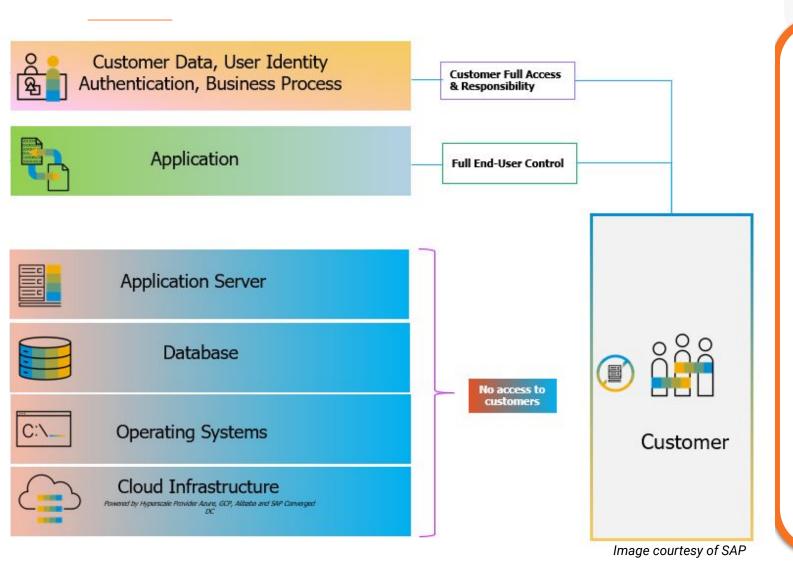
- Designed to facilitate an easier transition to the cloud with less risk.
- Fundamentally, a "best of" combination of laaS, PaaS, and SaaS
- Offers a bundle of tailor-made ERP software, transformation services, and business analytics to guide the digital transformation journey.
- Choose your own hyperscaler, and SAP deploys and manages your S/4HANA PCE landscape for you



## Remember: SAP & RISE Clients Share Security Responsibility



# Onapsis Simplifies Customer Security Responsibilities...





- Control ensures your custom app code is clean prior to migration
- Assess scans for misconfigurations, misauthorizations, as well as errors in custom code in production
- Assess UEBA and ML helps prioritize important Security Notes that are *not* automatically applied by SAP (<u>high, medium, low</u>)
- Defend monitors for zero-day threats to your landscape
- Comply automates SAP compliance and integrates with SAP PC (GRC)





## Some Questions to Ask Yourself...

- Do you have a true understanding of your real risk profile for your organization?
- □ Are you getting any / the right visibility into your ERP applications, such as SAP or Oracle, to help you manage risk and secure the business?
- Does your organization's security team have the right resources who can understand "the language of ERPs"?
- □ Has continuous monitoring of threats (both internal and external) in the ERP application been properly established?
- Have you determined what tools should be implemented to monitor specific financial reporting systems?
- Do you have a schedule for reviewing and implementing critical security patches for your ERP applications?
- Are cybersecurity controls established for the customized code used in ERP applications for reporting?
- □ Is there mapping in place for key cybersecurity controls to regulation frameworks (e.g., SOX, PCI, GDPR)
- Are Audit, InfoSec and IT teams able to continually assess and test these controls to provide the right level of assurance?



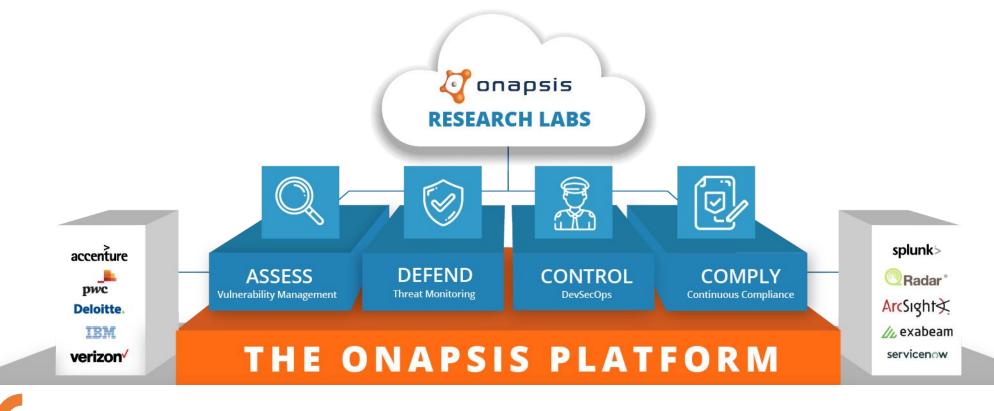


## ...And Five Things To Do Today





## The Onapsis Platform - Visibility and Tools To Protect Your ERP



"Prior to using Onapsis, we were **prioritizing simple fixes and ignoring critical vulnerabilities**, of which we identified 600 in 2018. Since we started using Onapsis, we've **remediated 90% of those critical vulnerabilities**, and 70% of the 10,000+ total we initially discovered." - F100 Biotech



"Saves time identifying, prioritizing, and remediating security vulnerabilities. **Enables security generalists** to ensure Basis is properly maintaining SAP systems." – F100 Tech Manufacturer



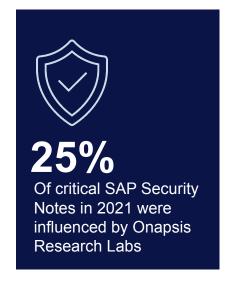


## Stay Ahead of the Threats With The World's Leading Researchers

#### ONAPSIS RESEARCH LABS

- Onapsis products automatically updated with latest threat intel and security guidance
- Receive advanced notification on critical issues and improved configurations
- Get pre-patch protection ahead of scheduled vendor updates









#### **COMPANY**

2K Employees

\$2B revenue

#### **INDUSTRY**

Energy



Onapsis removes the mystery around SAP security by increasing visibility. We can see ...misconfigurations, missing patches or unusual user activity: ... what risk they post and how to fix them



CHALLENGE: A labor intensive patch and vulnerability management process created visibility and security gaps within SAP for a small team

**SOLUTION:** Onapsis Assess and Defend to scan and continuously monitor its SAP environment for vulnerabilities, misconfigurations, missed patches, and new threats.

**RESULT:** Gained visibility into SAP, including activity of third party contractors; streamlined and automated the patch and vulnerability management process, allowing the team to scale and refocus

# **Thank You!**

@onapsis

linkedin.com/company/onapsis

**ONAPSIS.COM** 

