Solving the Paradox of Patching
A path for a more secure SAP

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In This Session

We will discuss how to resolve the conflict between system availability and security patching

We will show how Live Patching can enable a two-track process that combines periodic maintenance with a fast-path for high-impact vulnerabilities

What We'll Cover

- Challenges
- The Paradox of Patching
- The need for a Day-1 patching policy
- Solving the Paradox of Patching
- Wrap up

Challenges

- What are the threats?
- What organizational or technical challenges do these threats create?

Top SAP cybersecurity threats and challenges are closely related to the SAP platform

4 of 10

Top SAP Cybersecurity threats

- Unpatched systems
- Supply chain attacks
- Ransomware attacks
- Connections to other systems …

4 of top 4

Top SAP Cybersecurity challenges

- Detecting potential threats
- Keeping up with patches and updates
- Securing custom code
- Protecting data

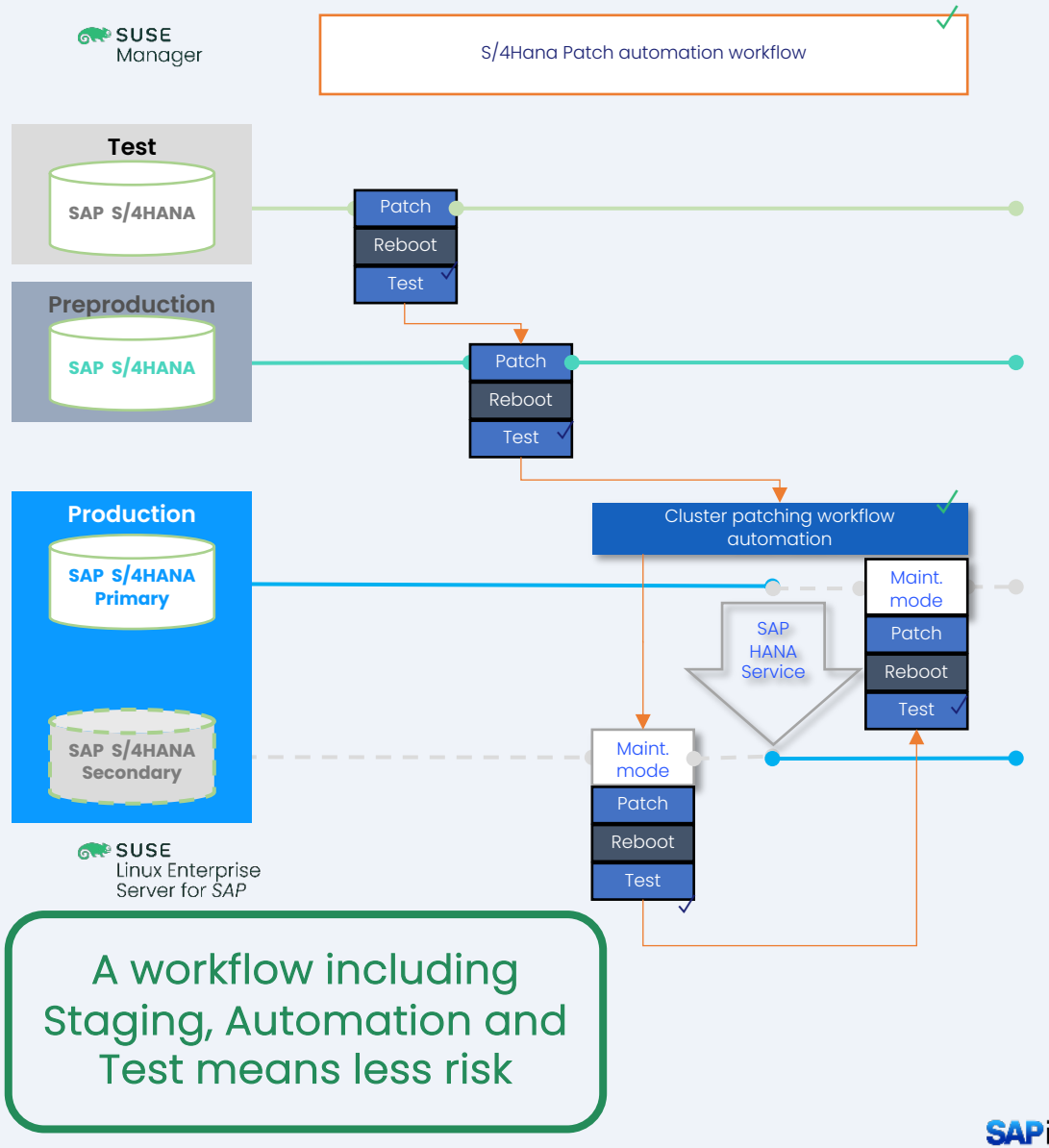
[1] "Cybersecurity Threats to SAP Systems" SAPInsider, March 2022. https://www.suse.com/c/cybersecurity-threats-to-sap-systems/

The Paradox of Patching

The more critical a system is and the more it needs to be available, the less likely it is to be patched to the latest state.

Example of S/4HANA patch process

- A baseline and staging ensure patches tests
- Cluster patch automation avoids error-prone operations
- Test checks running processes and applied patches
- Vulnerability scanner checks it



SAP Unpatched Systems Threat

SAP operating system vulnerabilities and critical bugs need to be fixed urgently

47%

SAP customers challenge to keep up with patches and updates

Day-1 vulnerabilities and critical bugs are a real threat !

- Complexity to **enforce security patching** policies
  - Inability to **negotiate maintenance windows** with service downtime
- Lack of vulnerability management tools

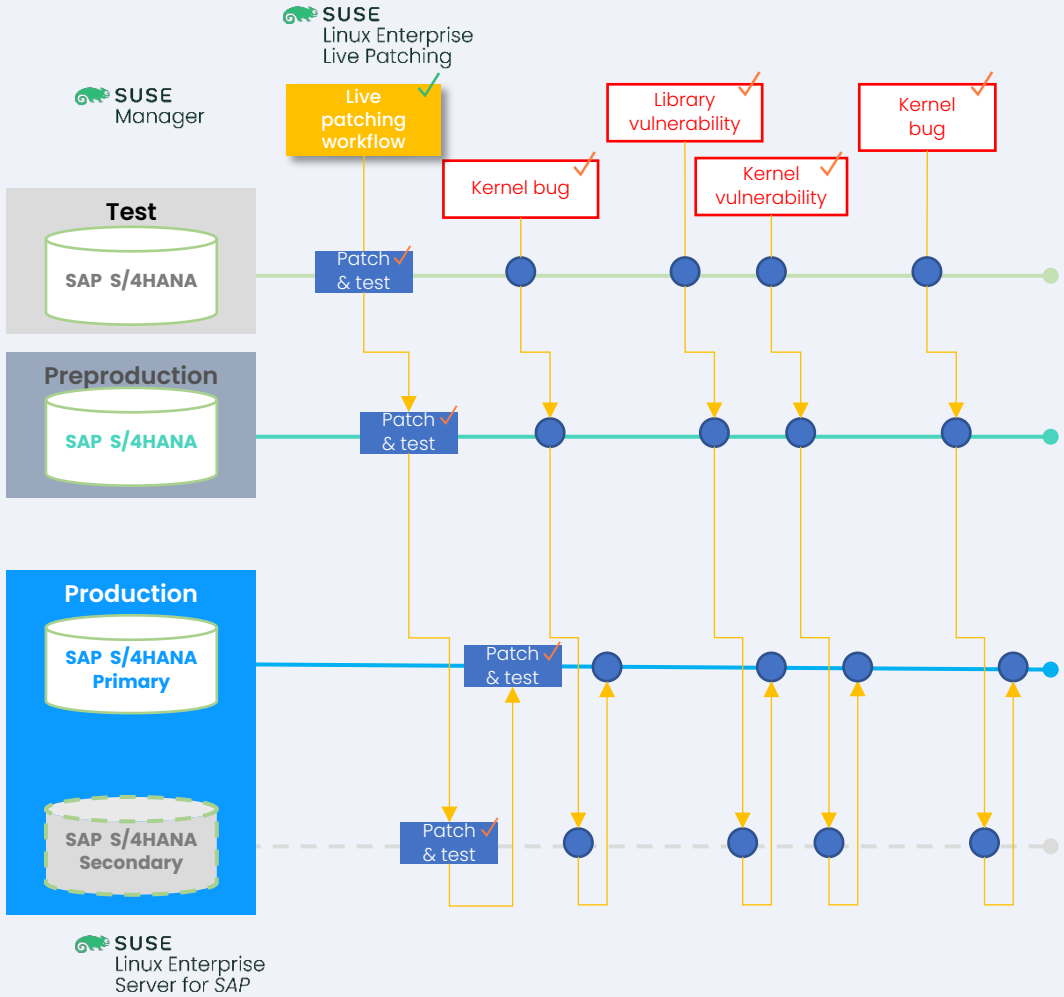
[1] "Cybersecurity Threats to SAP Systems" SAPInsider, March 2022. https://www.suse.com/c/cybersecurity-threats-to-sap-systems/

The need for a Day 1 patching policy

Once a *new* vulnerability is *known*,
how quickly can we prevent it?

Live patching without shutdowns

- Day-1 patching without Service downtime
- Staging ensures patch is tested.
- Include user space libraries too.
- Avoid crashes and data loss by fixing critical bugs
- Test checks running processes and applied patches
- Vulnerability scanner checks it



No service downtime means no need to patch outside working hours

Solving the Paradox of Patching

Enforcing a Day-1 patching policy on the SAP platform using SUSE Linux Enterprise Live Patching and SUSE Manager

The solution is a dual patching policy

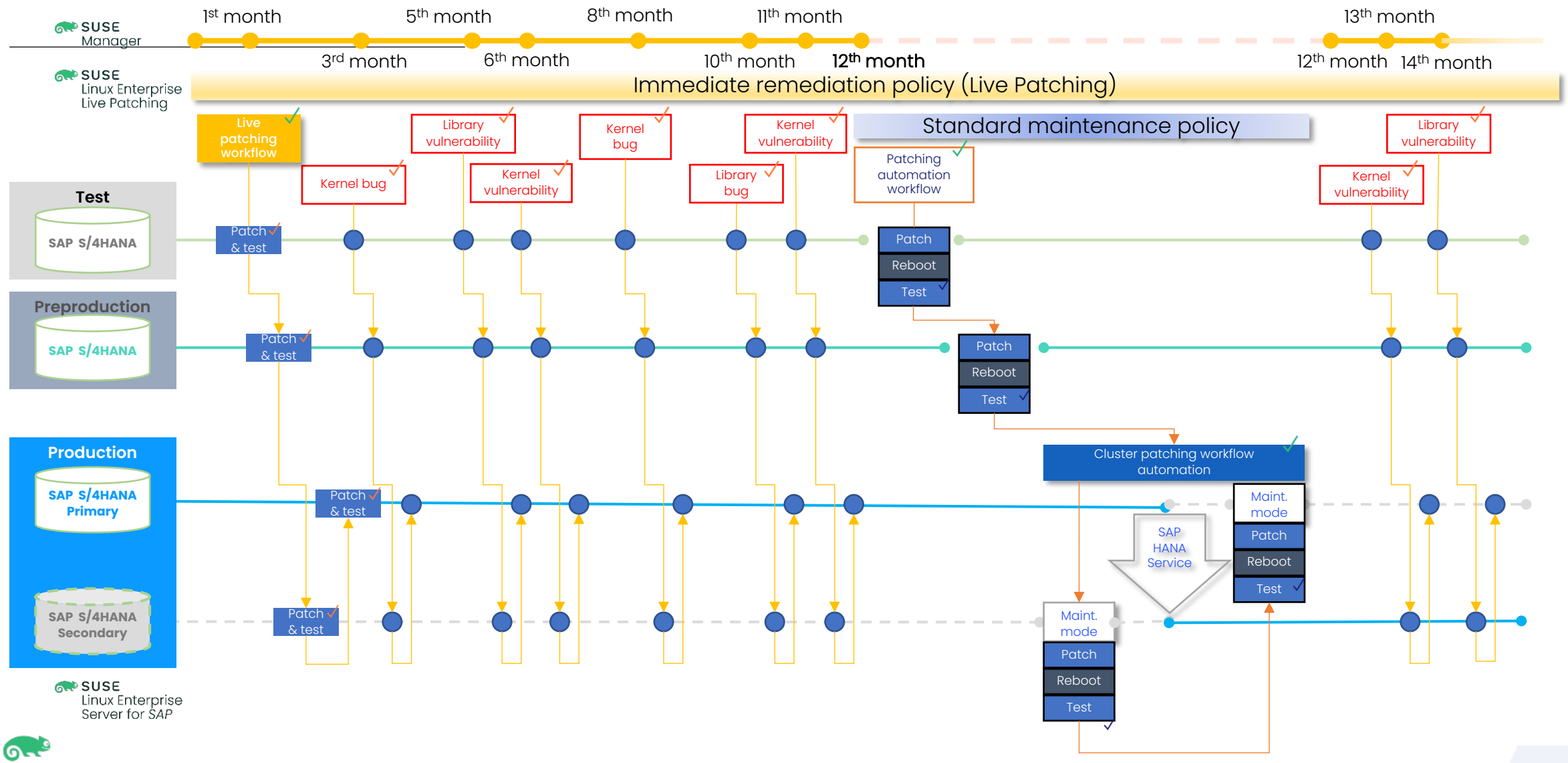
As soon as a vulnerability is known, the threat grows exponentially. Day-1 remediation addresses the gaps in periodic maintenance.

The day-1 patch is not optional Every day with a vulnerability is critical

- **Day-1 vulnerability remediation policy**
  - Vulnerabilities and bugs in OS Kernel and User Space libraries
  - **No downtime and no maintenance window**
  - Workflow, staging & test **ensure the system's reliability**.
  - Long-term **provider commitment** is needed
- **Regular maintenance, including patching**
  - All needed patches
  - Automate the patch application, including the clusters, to avoid disruption
  - Reboot needed

SUSE Linux Enterprise Server for SAP

SAP S/4HANA Dual patching policy with SUSE Live Patching and automation



Wrap up

- Secure your SAP platform by enforcing a day-1 vulnerability patching policy
- SUSE enables SAP customers to enforce a security patching policy to achieve a secure SAP platform that minimizes operational risk and cost.

SUSE Linux Enterprise Server for *SAP*

SAP® Endorsed App
Premium Certified

SLES for SAP applications is endorsed by SAP

SUSE Manager

SUSE Linux Enterprise Live Patching

Where to Find More Information

- SUSE web pages
  - https://www.suse.com/solutions/run-sap-solutions/
  - https://www.suse.com/products/suse-manager/
  - https://www.suse.com/products/sles-for-sap/
- Solving the patching paradox challenge
  - Blog post by Sebastian Martinez
- SAP Store
  - https://store.sap.com/dcp/en/search/SUSE
- Say Goodbye to Downtime
  - https://www.suse.com/goodbye-downtime/

Key Points to Take Home

- Vulnerabilities pose a significant risk to an organization's operations, and patching is crucial to maintain system security and stability
- Patching and updating software is always a top priority
- The patching paradox is one of the main security challenges that SAP environments face
- Organizations should define and implement a patching policy that outlines when to apply patches, factors to consider, and time windows for patching once a vulnerability is discovered
- The patching policy should address both Day-1 vulnerability patching and regularly scheduled updates
- A dual patching policy defines two patching workflows: An immediate remediation patching workflow and a regular maintenance patching workflow.

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