SAP Landscape Management Enterprise Edition
Live in Action

Solution Overview

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Public

THE BEST RUN **SAP**

Agenda

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Overview

02

Automated System Provisioning

03

Post Copy Automation

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Cloud Managers

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Automation Studio

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Demo

SAP Landscape Management Enterprise Edition

Key Use Cases

Automate Standardize Centralize

SAP Landscape Management

| DEV | QAS | PRD |

SAP applications

e.g. SAP S/4HANA | CRM | ERP | BW | SCM

Operating system and database

e.g. Linux | Windows | SAP HANA | Any DB

IT infrastructure

Virtualization | Storage | Network | Server

Non-SAP apps

Third-party tools

On-Premise   Cloud   Hybrid
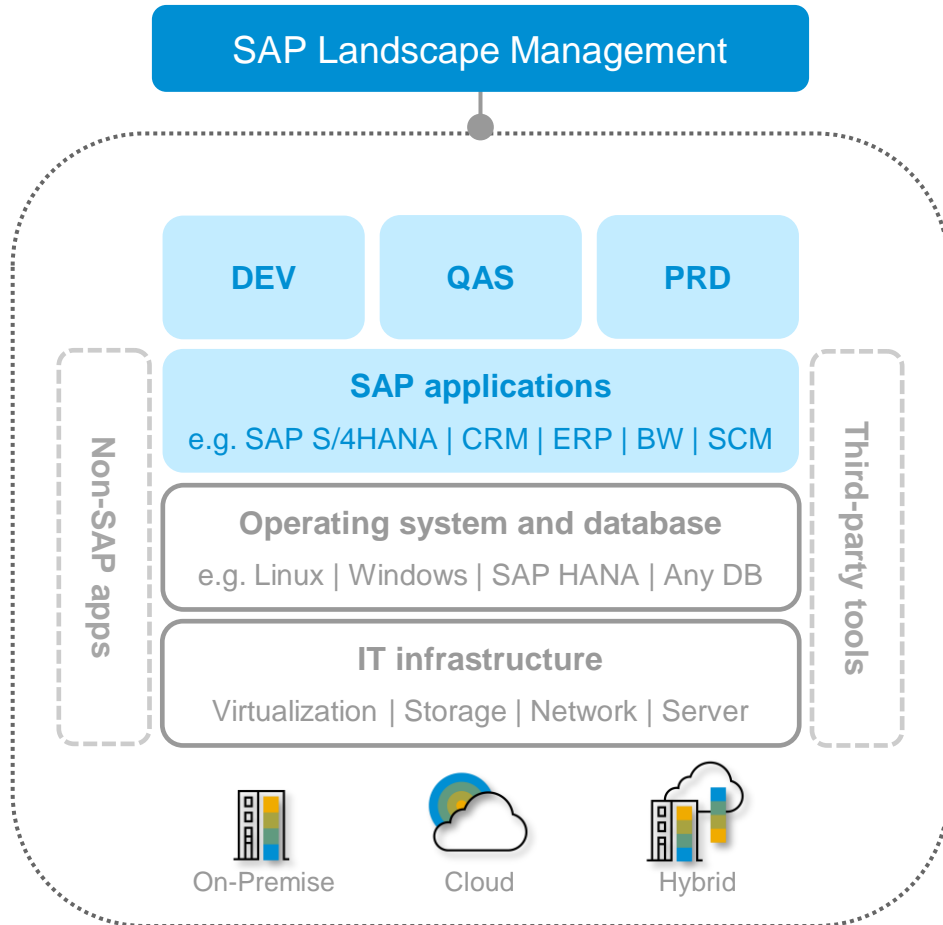
Automated system provisioning

Copy, refresh, clone including pre- and post-copy steps

Visualization and control

Visualization and control of system operations at various levels (e.g. start/stop, relocate etc.)

Cloud Manager

Access Cloud infrastructure

Near zero down time maintenance

nZDM for HANA and OS updates
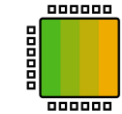
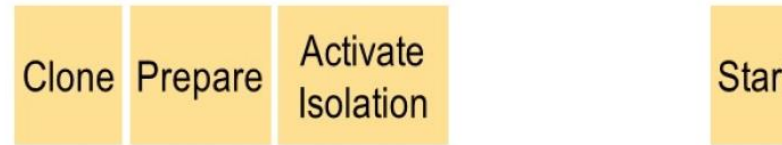**SAP HANA Management**

Replication, HA/DR, MDC, HANA refresh options

Extensibility /Integration

Customize to meet specific business needs

Automated System Provisioning

System Clone

Clone	Prepare	Activate Isolation		Start

System Copy

Clone	Prepare	Activate Isolation	System Rename	Start	Post-Copy Automation (PCA)	Deactivate Isolation (manual)

System Refresh

Export Configuration	Stop	Unprepare	Clone	Prepare	Activate Isolation	System Rename	Start	Import Configuration + PCA	Deactivate Isolation (manual)
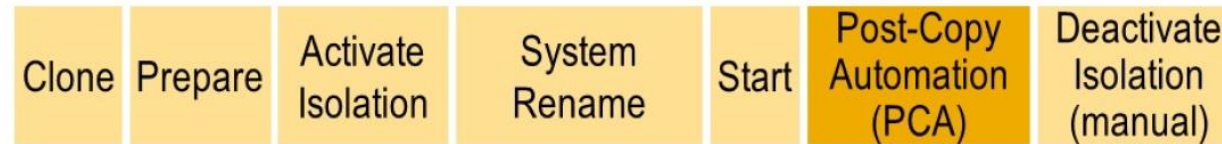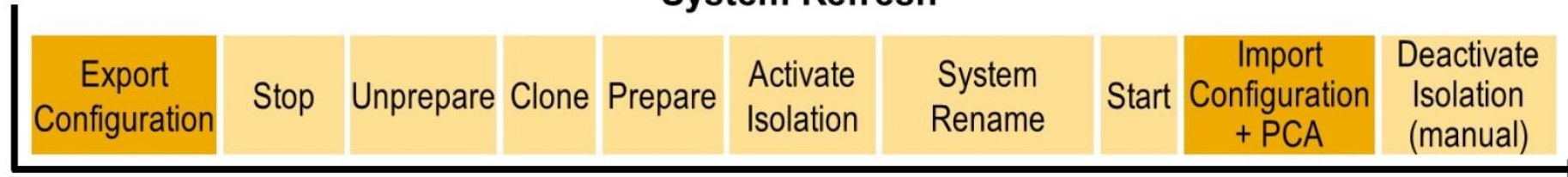
Built-in Cloning:
- Storage-based
- VM-based
- HANA (restore based or replication based)

Custom Process Cloning:
- Non-HANA DB custom clone (restore, replication etc.)

ABAP PCA - As Part of System Copy and Refresh Procedures

ABAP PCA initial copy task list automates activities required after system copy:

- **Clean-up:**
  Deletion of obsolete information copied from original system

- **Post-copy configuration:**
  Adaption of ABAP basis configuration settings

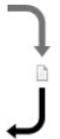PRD → system copy → TST → Reconfigure ✓

ABAP PCA refresh task list automates activities required for system refresh:

- **Pre-checks:**
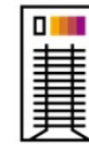 Perform checks to ensure consistency and actual use case

- **Retaining existing configuration:**
  Export and import of existing configuration settings to ensure they are retained after system refresh

- **Clean-up & post-copy configuration:**
  Deletion of obsolete information from original system in target system

PRD → System refresh ✓ → TST → Retain / Reconfigure
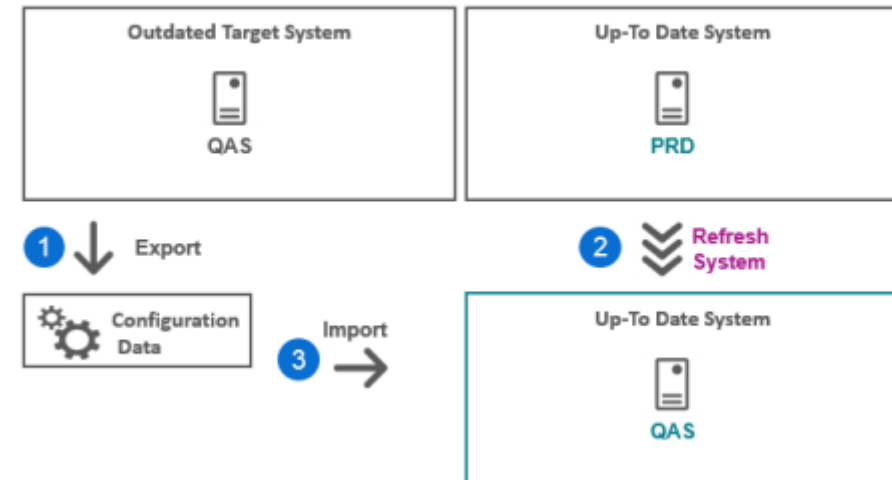
Refresh Options (Storage-Based)

- ## Refresh <u>Database</u> (storage-based)

  - ### Requires integration adapters

    - Cloud Adapters (AWS, Azure, GCP)
    - On-Premise Storage Adapters

- ## Refresh <u>System</u> (storage-based)

  - ### Requires an Adapter
  - ### Application Servers + **<u>AnyDB</u>** updated
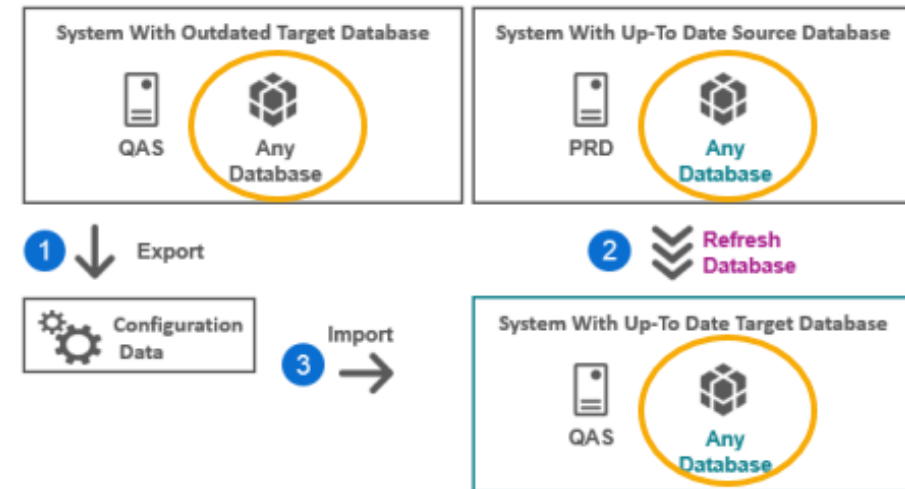
Refresh Options (HANA Replication Based)

- Refresh Database (HANA replication-based)
  - No Adapter Needed

- Refresh Tenant DB
  - No Adapter Needed
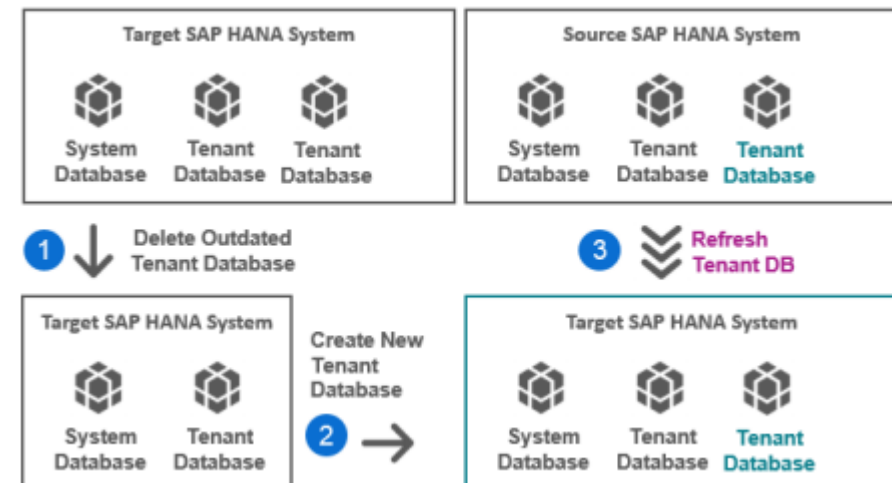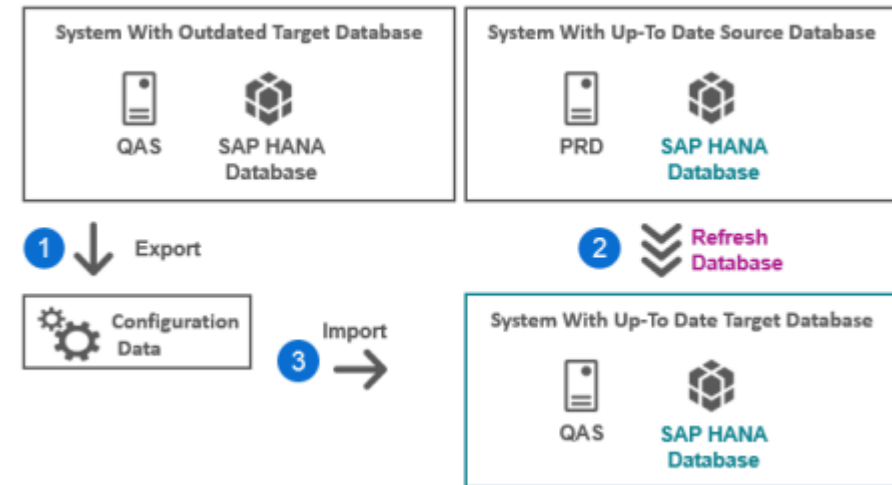
Refresh Options (Restore Based)

- Restore-based refresh (files)
  - No Adapter Needed
  - Out of box support for HANA
  - For non-HANA – Use Custom Refresh
  - Refer to blogs published on our community page for examples

- Restore-based refresh (backint)
  - No Adapter Needed

Cloud Managers:
Centrally manage your SAP landscapes deployed in the public cloud

Google Cloud Platform

Microsoft Azure

Amazon Web Services

- Similar capabilities to AWS adapter
Downloaded from Google
SAP Note: 3078321
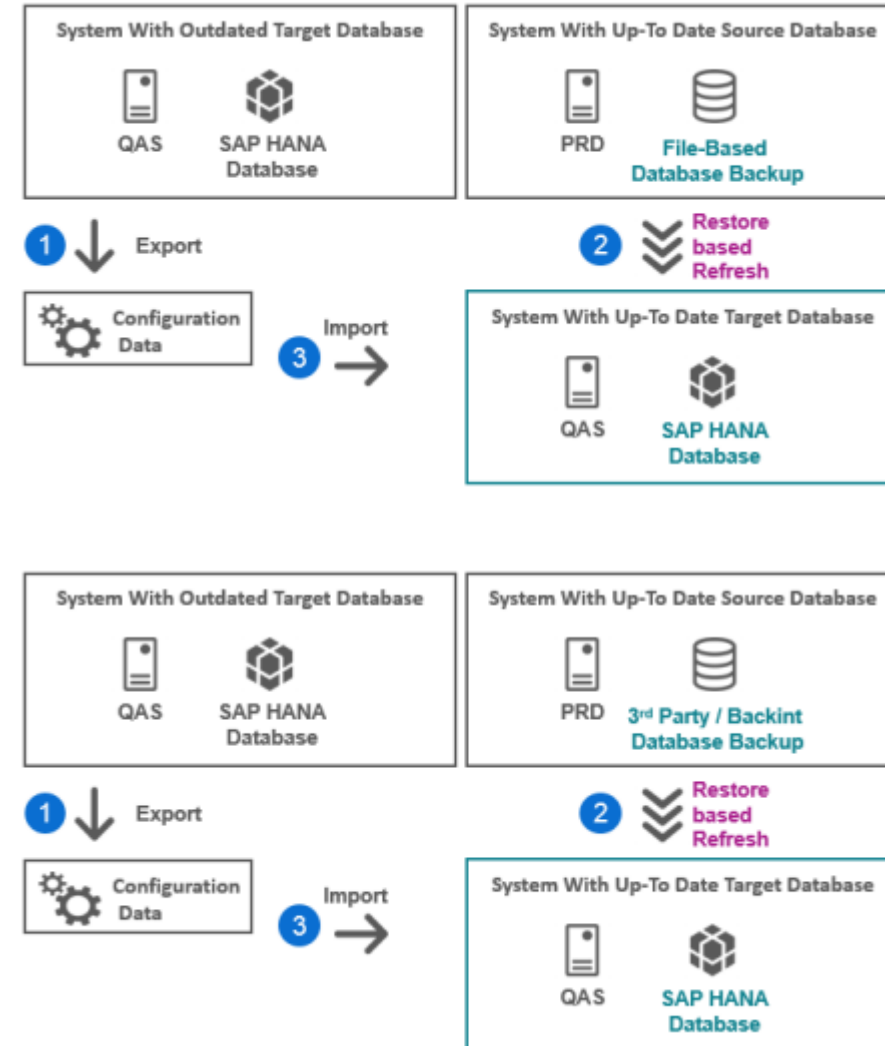
- Discover/Add/Manage VM's
- Offline VM Resize (restart required)
- Activate/Deactivate (VM power-on/off)
- Start/Stop (SAP systems)
- Azure Template Deployment
- SAP System Relocate (within the same availability zone)
- Clone/Copy/Refresh (across subscriptions/availability zones)
- Support for Linux & Windows
- Support for Azure Netapp Files (ANF)

Developed by Microsoft, Delivered with SAP Landscape Management
SAP Note: 2343511

SAP Landscape Management

- Discover/Add/Manage VM's
- Reboot/Resize/Destroy VM's
- Activate/Deactivate (VM power-on/off)
- Start/Stop (SAP systems)
- SAP System Relocate (within the same availability zone)
- SAP System Provisioning (Clone/Copy/Rename/Refresh)

Delivered with SAP Landscape Management
SAP Note: 2574820

On-premises Partner Integrations

- Virtualization
  - *IBM PowerVM*
  - *VMware vSphere*

- Storage
  - *Dell EMC*
  - *Huawei*
  - *IBM*
  - *NetApp*

- Latest info available on partner integration community page

Extensibility/Integration: Automation Studio

- Extend, customize, modify, or replace existing workflows

- Different types of extensions are offered such as the following:
  - **Custom hooks** that enhance SAP operations with its own functionality
  - **Custom process** that combine SAP and its own functionality to complex end-to-end processes
  - **Custom operations** that execute your own functionality using SAP Landscape Management
  - **Custom cloning** that is a "Bring your own replication technology" for SAP system provisioning
  - **Custom notifications** are used when you want to receive a notification, for example, receive message for failed activities

SAP Landscape Management (LaMa) 3.0
What's new with feature pack SP25 (current version)

REST APIs as provider definition
ability to create new provider definitions to execute REST API calls (LaMa would be able to call any end-point including itself)

Support for RedHat high-availability clusters with Pacemaker
integration with the RedHat Pacemaker cluster to offer "cluster-aware" management of SAP systems and avoid conflicts during operations performed via LaMa (SUSE support already present)
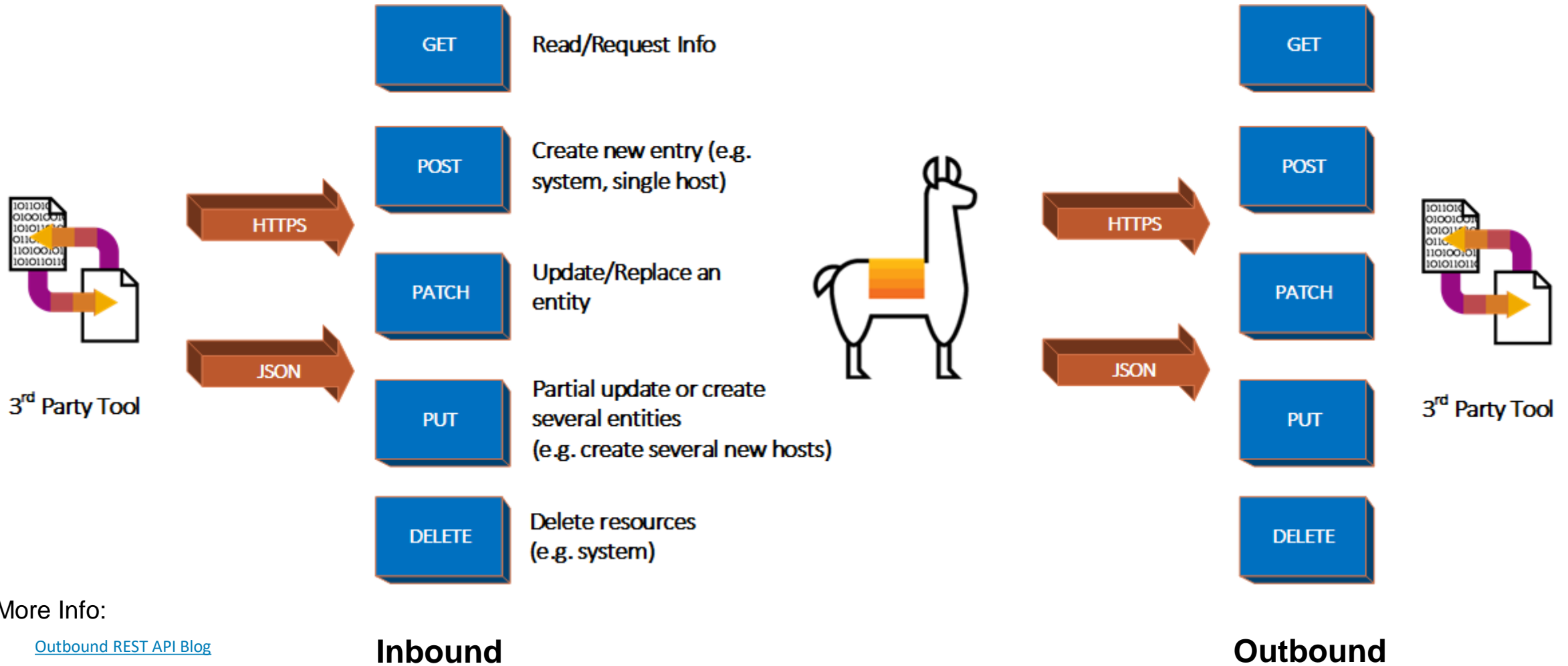
Ability to perform advanced kernel updates
in addition to performing a complete kernel-release update (available since SP17), user could now perform an update for select kernel components

SAP Road Map Explorer

Link to Official LaMa Road Map

REST API (Inbound & Outbound)

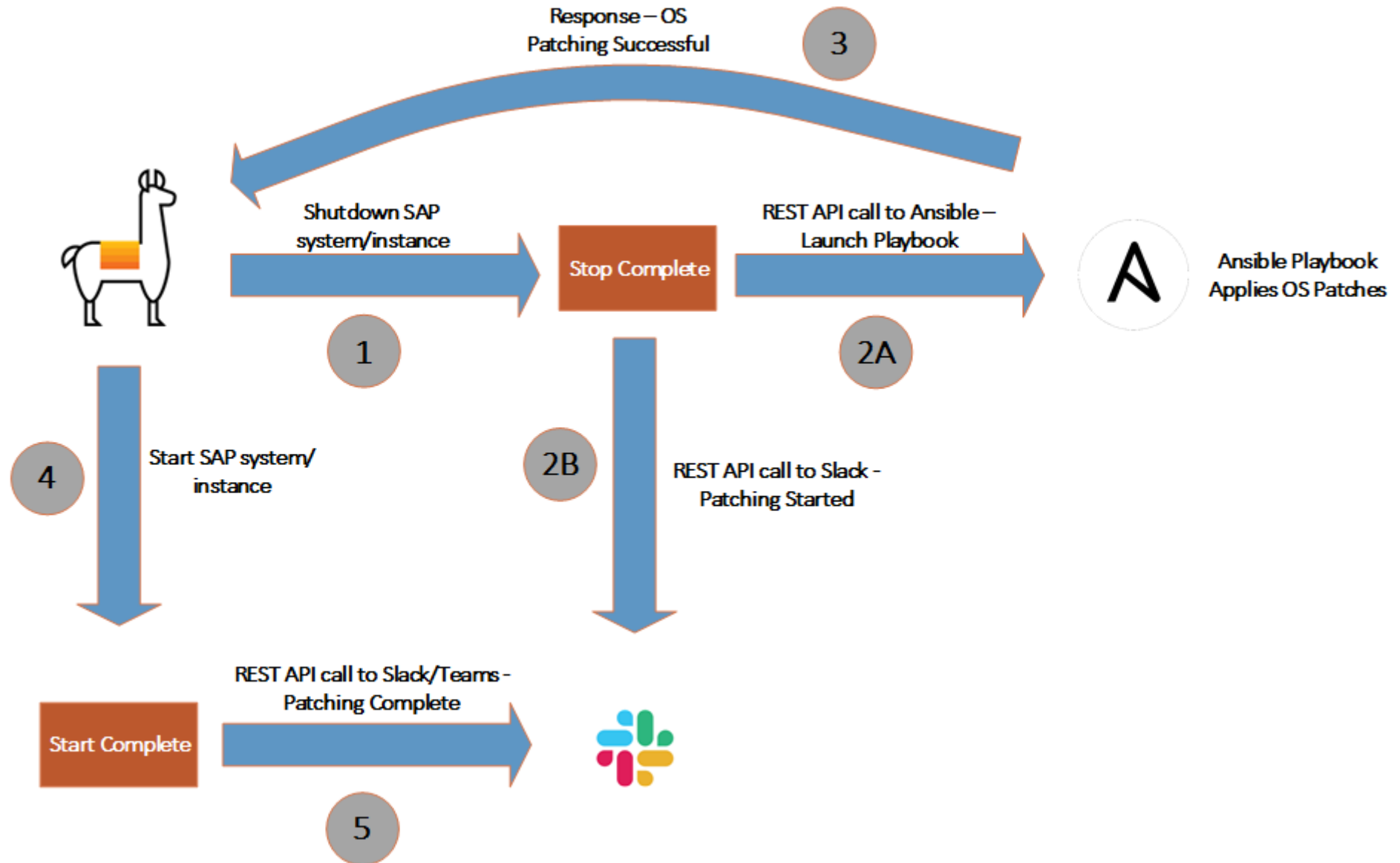| Method	Description
GET	Read/Request Info
POST	Create new entry (e.g. system, single host)
PATCH	Update/Replace an entity
PUT	Partial update or create several entities (e.g. create several new hosts)
DELETE	Delete resources (e.g. system)

Inbound

Outbound

More Info:

- Outbound REST API Blog
- Inbound REST API Blog
- SAP LaMa API Business Hub

REST API Outbound – Integration with 3rd party tools (Patching)

Response – OS Patching Successful — **3**

Shutdown SAP system/instance — **1**

Stop Complete

REST API call to Ansible – Launch Playbook — **2A**

Ansible Playbook Applies OS Patches

Start SAP system/ instance — **4**

REST API call to Slack - Patching Started — **2B**

Start Complete

REST API call to Slack/Teams - Patching Complete — **5**

REST API Outbound – Integration with 3rd party tools (Empty Target VMs)

Empty VMs created in
Hyperscaler (+ host agent)

Copied System
SID: B4H

Create VMs: API calls to
cloud infrastructure
provisioning tools

LaMa discovery of
new hosts (API call to
LaMa)

Source System
SID: A4H

System Copy

Built-in system copy
operation using new
empty VMs as target

```
{
    "entityDetectionType": "Hosts",
    "hostnames": [
        "string"
    ],
    "connectionTimeout": 0,
    "socketTimeout": 0,
    "hostAgentSettings": {
        "useSecureCommunication": true,
        "port": 1129,
        "httpProxy": "DefaultProxy",
        "authenticationType": "Basic",
        "userName": "sapadm",
        "password": "string",
        "clientCertificatePrivateKeyName": "string"
    },
```

Demo

SAP Landscape Management (LaMa)
Further information

Learn more

Check out our official documentation and the product page to learn more about SAP Landscape Management and get relevant details

Learn how to deploy and use

Check out our product page

Get engaged

Visit our SAP community page to engage with SAP experts, catch the latest news, ask questions and access valuable resources to fast-track your knowledge

Join the community

Follow us and spread the word

We are here to help.
Call us or write to us

Call us

Email us

Further Reading

Solution Brief (LaMa Enterprise Edition)

E-Learning Series (LaMa Enterprise Edition)

Product FAQs (LaMa Enterprise Edition)

Partner Integrations (LaMa Enterprise Edition)

Roadmap (LaMa Enterprise Edition)

Blog Series: Refresh Scenarios (LaMa Enterprise)

Post Copy Automation FAQ

Outbound REST API Blog

Inbound REST API Blog

Automation Studio Blogs

Cluster Manager Blog

Thank you.

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