SAP Landscape Management Enterprise Edition
Live in Action

Solution Overview
Naeem Maqsud, SAP
February 8, 2023
Public
Agenda

01 Overview

02 Automated System Provisioning

03 Post Copy Automation

04 Cloud Managers

05 Automation Studio

06 Demo
SAP Landscape Management Enterprise Edition

Key Use Cases

Automate  Standardize  Centralize

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

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

Third-Party tools

Non-SAP apps

On-Premise  Cloud  Hybrid

DEV  QAS  PRD

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences. | Public
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:**
  - Adoption of ABAP basis configuration settings

**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
Refresh Options (Storage-Based)

- Refresh **Database** (storage-based)
  - Requires integration adapters
    - Cloud Adapters (AWS, Azure, GCP)
    - On-Premise Storage Adapters

- Refresh **System** (storage-based)
  - Requires an Adapter
  - Application Servers + **AnyDB** 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

- 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

Google Cloud Platform

Microsoft Azure

- 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

Amazon Web Services

• Similar capabilities to AWS adapter
Downloaded from Google
SAP Note: 3078321

Developed by Microsoft, Delivered with SAP Landscape Management
SAP Note: 2343511
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
REST API (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)

1. Start SAP system/instance
2A. REST API call to Ansible – Launch Playbook
2B. REST API call to Slack – Patching Started
3. Response – OS Patching Successful
4. Start SAP system/instance
5. Start Complete

Ansible Playbook Applies OS Patches

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences. | Public
REST API Outbound – Integration with 3rd party tools (Empty Target VMs)
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

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

Learn how to deploy and use
Check out our product page

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.

Contact information:

Naeem Maqsud
SAP Labs, Palo Alto (USA)
Product/Solution Management | SAP Cloud & Lifecycle Management
naeem.maqsud@sap.com