SUSE Manager for Retail 3.2 Overview
TUT1075

Kim Frederiksen
kfrederiksen@suse.com
Sales Engineer
Cape Town, South Africa
Best-in-class open source infrastructure management solution optimized and tailored specifically for the retail industry. It is designed to help your enterprise DevOps and IT Operations teams to:

• Optimize operations while reducing **costs**
• Reduce **complexity** and regain control of IT assets
• Ensure **compliance** with internal security policies and external regulations
• Increase **reliability** and up-time of store infrastructure
Optimize Operations and Reduce Costs

Enabling IT administrators to automate their Linux server provisioning, patching and configuration for faster, consistent and repeatable server deployments

Manage all of your Enterprise Linux Distributions from a single tool
Reduce Complexity and Regain Control of Your IT Assets

Using a single tool to manage Linux system configuration and compliance across a variety of hardware architectures, hypervisors and cloud platforms.
Ensure Compliance

With internal security policies and external regulations with automated monitoring, tracking, auditing and reporting

- Search Common Vulnerability and Exposures (CVE) database
- Check security compliance with OpenSCAP
- Identify & remediate vulnerabilities
- Verify patches
- Validate security settings
From the store to the core to the cloud

A unified tool to manage IT infrastructure across the entire retail environment
Evolution of SUSE’s retail offering
The timeline

- IBM Retail Environment for SUSE Linux (IRES) 2002
- Novell Linux Point of Service (NLPOS) 2008
- SUSE Linux Enterprise Point of Service 10 2009
- SUSE Linux Enterprise Point of Service 11 2013
- SUSE Manager for Retail 3.1 2017
- SUSE Manager for Retail 3.2 2018
SUSE Manager for Retail

Diagram:
- 3rd Party Repository
- SUSE Customer Center
- Custom Repository
- Subscription Management Tool
- SUSE Manager Server
- KIWI build host
- Branches
- Store A: SUSE Manager for Retail Branch Server
- POS
- Store Y: POS
- Store Z: POS
The Transition

**SUSE Linux Enterprise Point of Service**
- Central Server
- Store Server
- POS hardware

**SUSE Manager for Retail**
- Central Server
- Store Server
- POS hardware
## The Transition

<table>
<thead>
<tr>
<th>Use-case</th>
<th>SUSE Linux Enterprise Point of Service</th>
<th>SUSE Manager for Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Management</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Package Management</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Patch Management</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Client Management</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Provisioning</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Configuration Management</td>
<td>✗</td>
<td>✓</td>
</tr>
</tbody>
</table>

Image Management ➔ Managed End-point
SUSE Linux Enterprise Point of Service
Past, Present and Future
Past

SUSE Linux Enterprise Point of Service

SUSE Linux Enterprise Point of Service = 3-tiered stack from the data center to the point of service terminals

The SUSE Linux Enterprise Point of Service Admin and Branch server patterns (“add-on”) were supported on top of SUSE Linux Enterprise Server
Present

BEFORE

SUSE Linux Enterprise Point of Service Admin Server

Central Server

SUSE Linux Enterprise Point of Service Branch Server

Store Server

SUSE Linux Enterprise Point of Service Clients

POS hardware

NOW

SUSE Linux Enterprise Point of Service is now a ‘Client only’ product

SUSE Linux Enterprise Point of Service Clients

POS hardware
Present and future

SUSE Manager for Retail

- Central Server
- SUSE Manager Server
- SUSE Manager for Retail Branch Server
- Store Server
- SUSE Linux Enterprise Point of Service Clients
- POS hardware
What is the difference between SUSE Manager and SUSE Manager for Retail?

Retail Solution

- **SUSE Manager for Retail**
  - SUSE Manager Server
  - SUSE Manager for Retail Branch Server
  - SUSE Linux Enterprise Point of Service Clients

- **SUSE Manager**
  - SUSE Manager Server
  - SUSE Manager Proxy

**Different use case**

**Different pricing for SUSE Manager Proxy in Retail**

- SUSE Manager for Retail = SUSE Manager + Retail features
  - SUSE Manager deployed in the Retail environment
- The SUSE Manager for Retail Branch Server = SUSE Manager Proxy + Retail features
Retail Solution

Deployment Scenarios
Scenario 1

Centralized control

- Image Build Server
- SUSE Manager Server
- SUSE Manager for Retail deployed to manage *distributed store environments* only
- With each store running *SLEPOS Clients* only

For illustration purposes only. Other deployment scenarios like...
Scenario 2

SUSE Manager for Retail deployed to manage *distributed* store and *non-store* environments

With each store running *SLEPOS Clients* only

Other locations may run *diverse Linux instances*
Scenario 3

SUSE Manager for Retail deployed to manage *distributed store environments* only

With each store running both *SLEPOS Clients* and other *Linux instances*
Scenario 4

Centralized control

Image Build Server

SUSE Manager Server

Server

Store

SLEPOS Clients

SUSE Manager for Retail deployed to manage *distributed server-less store environments* only

With each store running *SLEPOS Clients* only

For illustration purposes only.

Other deployment scenarios like...
Feature Overview

SUSE Manager for Retail
Infrastructure life-cycle management

- Image Management
- Deployment
- Core
  - Asset Management
  - Provisioning
  - Configuration Management
  - Package Management
  - Patch Management
  - Redeployment
- Security & Compliance
- Auditing
User Interface

Efficient and well organized, enabling a single user to move easily among the functions and services to keep a clear view of network resources.
Image Management – Building

With SUSE Manager for Retail 3.2, you can:

- Install and configure an **Image Build host**
- Build images for your POS devices using predefined templates
- Store those images in SUSE Manager’s Image Store
Deployment – Store servers

With SUSE Manager for Retail 3.2, you can:

- **Deploy a Branch Server** in every store
- Configure it to provide PXE boot services
- Configure it to manage local networking as well as provide DHCP, DNS and FTP services

*Achieved through Salt Formulas*
Deployment – POS terminals

With SUSE Manager for Retail 3.2, you can:

- **Deploy POS devices** with the requisite images
Store Infrastructure Management

Post deployment, leverage the full feature set of SUSE Manager:

- Manage and deploy packages and patches
- Inventory store assets, check compliance status
- Salt based configuration management
- And more...
Asset Management

Key capabilities

- **Inventory** hardware and software systems
- **Create reports** for physical, virtual machines and cloud instances
- **Assign subscriptions**
- SUSE Customer Center integration enables subscription matching
- **Identify** over- or under-utilization
- **Visualize** asset landscape
- **Group and classify** all managed systems (e.g., by location, rack, vendor, role, or CPU architecture) for easier visualization
Provisioning

Key capabilities

- **Unattended installation** (bare metal and virtual guests)
- Rapid setup of *network installation environments*
- Provision and start/stop/configure **virtual guests**
- Define the **product type and nature** (virtual, bare metal, etc.)
- Define the **configuration system** (Salt or file-based management)
- **Track server changes** and return to a previous version or configuration if required
Software and Package management

Key capabilities

- **Centralized package pools**
- Collect and distribute *custom software packages*
- Centrally push software by *grouping POS systems*
- Create *customized repositories* for the delivery of operating system packages or RPM-based applications and content
- *Provision RPM-based applications* to automatically deploy complete, integrated software stacks
- Remove *unnecessary system packages* and freeze the current configuration
- *Package search* across systems and channels, with dependency mapping
Patch Management

Key capabilities

- *Centralized* patch database
- *Customized* patch descriptions
- Support for *content staging*, from development to production
- *Role based access control*
- Connect to *SUSE Customer Center* to easily access updates, security patches and service packs
- Receive *notifications* when the latest updates are available
Configuration Management

Key capabilities

- Support for *file based* configuration management
- Support for *Salt-based* configuration management for fast and secure deployment of thousands of systems
- Group your configurations in channels for efficient deployment
- Develop and maintain *standardized configuration profiles* for systems or groups of systems
- Deploy and parameterize *Salt formulas with standardized forms* via SUSE Manager UI
- Support for *Action Chains* to use a single command to specify a complex task
After you finish the initial configuration, the System Set Manager (SSM) provides an efficient way to administer many systems simultaneously.
Security and Compliance

Key capabilities

- Automatic, system wide configuration and vulnerability scans
- Support for CVE (Common Vulnerabilities and Exposures) lists and OpenSCAP protocol
- Search for CVE numbers in all patches released by SUSE
- Generate custom reports of all the machines affected by a specific CVE
- Track system compliance to current patch levels
- Identify and remediate out of compliance systems, deployed in cloud and container infrastructures
SUSE Linux Enterprise Point of Service Clients
The Present and the Future

BEFORE
- SUSE Linux Enterprise Point of Service Admin Server
- Central Server
- SUSE Linux Enterprise Point of Service Branch Server
- Store Server
- SUSE Linux Enterprise Point of Service Clients
- POS hardware

NOW
SUSE Linux Enterprise Point of Service is now a ‘Client only’ product

SUSE Linux Enterprise Point of Service Clients
POS Hardware
Supported Service Packs and Lifecycle

SUSE Linux Enterprise Point of Service Clients based on both SUSE Linux Enterprise Server 12 SP3 and SP4 will be supported until March 31st 2025

- Support is restricted to a limited set of packages (typical use case on cash registers)
- Support is restricted to the retail point of service environment
Extended Lifecycle – Client Systems

- **SUSE Linux Enterprise Point of Service 12 SP3 Clients** supported on POS client systems until **March 31, 2025**
- **SUSE Linux Enterprise Point of Service 12 SP4 Clients** supported on POS client systems until **March 31, 2025**
- Restricted to a limited set of packages – typical use case on cash registers
- Support is restricted to the retail point of service environments
## Important dates

<table>
<thead>
<tr>
<th>Task</th>
<th>SLEPOS 12 SP3</th>
<th>SLEPOS 12 SP4</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>End of Life</td>
<td>31st March 2025</td>
<td>31st March 2025</td>
<td>-</td>
</tr>
<tr>
<td>End of new hardware enablement</td>
<td>31st December 2018</td>
<td>31st March 2023</td>
<td>On a best effort basis</td>
</tr>
<tr>
<td>End of hardware certification</td>
<td>31st March 2025</td>
<td>31st March 2025</td>
<td>Hardware certification only. For any enablement needs, the aforementioned deadlines and restrictions apply.</td>
</tr>
<tr>
<td>Customer must rebuild image by</td>
<td>31st March 2022</td>
<td>31st March 2022</td>
<td>Image rebuild with SUSE Manager for Retail build host required only if SUSE Linux Enterprise Point of Service Client was build with SUSE Linux Enterprise Point of Service Image Server 12</td>
</tr>
</tbody>
</table>
Where Does Legacy SUSE Linux Enterprise Point of Service Go from Here?
Legacy SUSE Linux Enterprise Point of Service

SUSE Linux Enterprise Point of Service

SUSE Linux Enterprise Point of Service
- Admin Server
- Branch Server
- Store Server
- POS hardware

SUSE Linux Enterprise Point of Service = 3-tiered stack from the data center to the point of service terminals

The SUSE Linux Enterprise Point of Service Admin and Branch server patterns (“add-on”) were supported on top of SUSE Linux Enterprise Server
**SUSE Linux Enterprise Point of Service 11 SP3**

Supported as a stand-alone product until March 2022, with the following conditions:

<table>
<thead>
<tr>
<th>Component</th>
<th>Without LTSS</th>
<th>With LTSS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin Server</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- on SLES 11 SP3</td>
<td>31 Jan 2016</td>
<td>31 March 2019</td>
</tr>
<tr>
<td>- on SLES 11 SP4</td>
<td>31 March 2019</td>
<td>31 March 2022</td>
</tr>
<tr>
<td><strong>Branch Server</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- on SLES 11 SP3</td>
<td>31 Jan 2016</td>
<td>31 March 2019</td>
</tr>
<tr>
<td>- on SLES 11 SP4</td>
<td>31 March 2019</td>
<td>31 March 2022</td>
</tr>
<tr>
<td><strong>SLEPOS 11 SP3 Clients</strong></td>
<td></td>
<td>31 March 2022</td>
</tr>
</tbody>
</table>
What is the Migration Path?

SUSE Linux Enterprise Point of Service
- SUSE Manager for Retail
  - SUSE Manager Server
    - SLES 12 SP4
  - SUSE Manager for Retail Branch Server
    - SLES 12 SP4
- SUSE Linux Enterprise Point of Service Clients
  - SLEPOS 12 SP3/SP4

SUSE Linux Enterprise Point of Service
- SUSE Linux Enterprise Point of Service Admin Server
  - SLES 11 SP4
- SUSE Linux Enterprise Point of Service Branch Server
  - SLES 11 SP4
- SUSE Linux Enterprise Point of Service Clients
  - SLEPOS 11 SP3
Where to Start?

Engage SUSE Consulting Services

Engage SUSE Manager for Retail Engineering Team
Workflow – Starting Point

For illustration purposes or other deployment scenarios like SLES 12 Manager Server and SLEPOS Admin to SLEPOS Branch.

*This is a simplified version. For details, check: https://www.suse.com/documentation/suse-manager-for-retail-3-2/retail-migration/*
Scenario 3 – Workflow

1. Install SUSE Manager Server 3.2

*This is a simplified version. For details, check: https://www.suse.com/documentation/suse-manager-for-retail-3-2/retail-migration/
Scenario 3 – Workflow

1. Install SUSE Manager Server 3.2

2. Data migration (altogether or per branch basis)

*This is a simplified version. For details, check: https://www.suse.com/documentation/suse-manager-for-retail-3-2/retail-migration/
Scenario 3 – Workflow

1. Install SUSE Manager Server 3.2

2. Data migration (altogether or per branch basis)

3. Migrate branches 1-by-1

*This is a simplified version. For details, check: https://www.suse.com/documentation/suse-manager-for-retail-3-2/retail-migration/
Scenario 3 – Workflow

1. Install SUSE Manager Server 3.2

2. Data migration (altogether or per branch basis)

3. Migrate branches 1-by-1

4. Remove SLEPOS Admin

*This is a simplified version. For details, check: https://www.suse.com/documentation/suse-manager-for-retail-3-2/retail-migration/
Scenario 3 – Workflow

1. Install SUSE Manager Server 3.2

2. Data migration (altogether or per branch basis)

3. Migrate branches 1-by-1

4. Remove SLEPOS Admin

5. Upgrade to 4.0 in future

*This is a simplified version. For details, check: https://www.suse.com/documentation/suse-manager-for-retail-3-2/retail-migration/
Roadmaps
** Item delivered post GA
Information is forward looking and subject to change at any time.
### Retail Point of Service Products

#### SUSE Manager for Retail

<table>
<thead>
<tr>
<th>Version</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General**
- PXE with image support
- KIWI-based image building

**Configuration Management**
- Full UI for Salt-based config management
- Salt Formulas with Forms for configuring Branch Server services (DHCP, TFTP, PXE, DNS)

**Life Cycle**
- Long-term support included

### SUSE Linux Enterprise Point of Service Clients

<table>
<thead>
<tr>
<th>Version</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 SP3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 SP4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Base OS**
- SUSE and partner selected hardware enablement, including driver updates

**Life Cycle**
- Long-term support included

### General

- **General**
  - Usability improvements
  - Off-line store capability
  - Support for low bandwidth environments
  - Multi-OS management support (openSUSE, Ubuntu, CentOS)
  - Build templates for SLES 12 SP4 POS Clients
  - Improved scalability

- **SDI Management**
  - Basic VM management

- **Monitoring**
  - Prometheus/Grafana based monitoring

- **General**
  - Image management over WiFi
  - Enhanced support for server-less stores
  - Build templates for SLES 15 POS clients
  - Windows client management
  - Bandwidth throttling
  - Support for very large scale environments

- **SDI Management**
  - Advanced VM management
  - Life-cycle management of SAP environments
  - Hardware asset management

- **Monitoring**
  - Support for store infrastructure monitoring

### General

- **General**
  - Management of store IoT devices
  - Multi-cast support

- **SDI Management**
  - Edge IT infrastructure management
  - Improved hardware asset management
  - Software Asset Intelligence

- **Monitoring**
  - Advanced monitoring capabilities
  - Log management
  - Alerting

### General

- **General**
  - Management of store IoT devices
  - Multi-cast support

- **SDI Management**
  - Edge IT infrastructure management
  - Improved hardware asset management
  - Software Asset Intelligence

- **Monitoring**
  - Advanced monitoring capabilities
  - Log management
  - Alerting

---

* Information is forward looking and subject to change at any time.

* Base OS: 1 – SLES 12 SP4, 2 – SLES 15 SP1, 3 – SLES 15 SP2, 4 – SLES 15 SP3
Thank You
Unpublished Work of SUSE LLC. All Rights Reserved.
This work is an unpublished work and contains confidential, proprietary and trade secret information of SUSE LLC. Access to this work is restricted to SUSE employees who have a need to know to perform tasks within the scope of their assignments. No part of this work may be practiced, performed, copied, distributed, revised, modified, translated, abridged, condensed, expanded, collected, or adapted without the prior written consent of SUSE. Any use or exploitation of this work without authorization could subject the perpetrator to criminal and civil liability.

General Disclaimer
This document is not to be construed as a promise by any participating company to develop, deliver, or market a product. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. SUSE makes no representations or warranties with respect to the contents of this document, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. The development, release, and timing of features or functionality described for SUSE products remains at the sole discretion of SUSE. Further, SUSE reserves the right to revise this document and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes. All SUSE marks referenced in this presentation are trademarks or registered trademarks of Novell, Inc. in the United States and other countries. All third-party trademarks are the property of their respective owners.