Retail Transformation
From the Store to the Core to the Cloud

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Shopper experience
Modern Retail
Wednesday – 11 am

Wednesday – 6 pm
The changing face of retail
SINGLE Channel

MULTI Channel

CROSS Channel

OMNI Channel

SEAMLESS

Source: xplace GmbH
Shopper expectations

- Comfort
  - Friction-less
  - Fast and Convenient

- Context
  - Personalized recommendations
  - Location awareness

- Control
  - Choice of interaction points
  - Seamless continuity
Shopper expectations

EXPERIENCES

- Comfort
- Friction-less
- Fast and Convenient
- Personalized recommendations
- Location awareness
- Choice of interaction points
- Seamless continuity
- Control
Implications for a retailer

Processes impacted across the retail value chain
Implications for a retailer

Processes impacted across the retail value chain

- Logistics & Supply Chain
- Strategy & Planning
- Merchandising
- Store Operations
- Marketing
- Customer Experience

- Integrate customer touch points
- Upgrade back-end IT
- Capture + Analyze behavior
- Scale compute resources dynamically
- Personalize recommendations
Retailer’s challenges

- Distributed environments
- Always-on services
- Monolithic legacy apps
- Large data volumes
- Limited agility
- Tight budgets & margins
- Store IT infrastructure
- Network infrastructure
- Security & Compliance
- Compute & storage capacity
- Seasonal variance in compute needs
- Over/Under-stocking
Retailers need platforms that are

**Agile**
In order to deliver services faster and keep up with the expansion of digital channels

**Scalable & elastic**
To keep up with data growth

**Highly available**
To remain always on, customers needed a platform that included comprehensive monitoring and traceability

**Manageable**
To manage dependencies and include a comprehensive deployment mechanism for rapid releases

Source: SUSE | AWS | Wipro
Retailers need infrastructure elements

- Robust Networks
- Hybrid/Multi Cloud
- Hyper-converged Infrastructure
- Micro DCs at the Edge
- Large Data Storage pools
But......

1.5% - 4%

Net profit margins are under constant pressure
Ideal for software defined solutions based on open source technologies that are driving down total costs of ownership
And this is where SUSE comes in

SUSE delivers from Store to Core to Cloud
Alongside its partner eco-system
SUSE Products
bridging the gap
SUSE Manager for Retail

SUSE Linux Enterprise Point of Service
SUSE Linux Enterprise High Performance Computing

SUSE Linux Enterprise for SAP Applications
SUSE Enterprise Storage

SUSE OpenStack Cloud
SUSE CaaS Platform

SUSE Cloud Application Platform
Infrastructure management with SUSE Manager for Retail
Retail environment

Dispersed Infrastructure
SUSE Manager for Retail

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.
Infrastructure life-cycle management

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

SUSE Manager for Retail
Evolution of SUSE’s retail offering
The timeline

IBM Retail Environment for SUSE Linux (IRES)

2004

2002

SUSE Linux Retail Solution (SLRS)

2008

Novell Linux Point of Service (NLPOS)

2009

SUSE Linux Enterprise Point of Service 10

2013

SUSE Linux Enterprise Point of Service 11

2017

SUSE Manager for Retail 3.1

2018

SUSE Manager for Retail 3.2
SUSE Linux Enterprise Point of Service
The Transition

SUSE Linux Enterprise Point of Service

- SUSE Linux Enterprise Point of Service Admin Server
- Central Server

- SUSE Linux Enterprise Point of Service Branch Server
- Store Server

- POS Hardware

SUSE Manager for Retail

- SUSE Manager Server
- Central Server

- SUSE Manager for Retail Branch Server
- Store Server

- POS Hardware

SUSE Linux Enterprise Point of Service Clients
The Transition

<table>
<thead>
<tr>
<th>Use-case</th>
<th>SUSE Linux Enterprise Point of Service</th>
<th>SUSE Manager for Retail</th>
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<tbody>
<tr>
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Image Management ➔ Managed End-point
SUSE Linux Enterprise Point of Service

Past, present and future
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
We have a ‘solution’ catering to the needs of the retail industry.

The ‘solution:’

- SUSE Manager for Retail
  + SUSE Linux Enterprise
  Point of Service Clients

The SUSE Linux Enterprise Point of Service Client images can be built and deployed with SUSE Manager for Retail.
What is the difference between SUSE Manager and SUSE Manager for 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

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

With each store running *SLEPOS Clients* only
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

SUSE Manager

Server

Image Build
Server

Store

SLEPOS Clients

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

With each store running *SLEPOS Clients* only

*Yet to be delivered*
**SUSE Linux Enterprise Point of Service Clients**

**Base OS**
- Significant hardware enablement, including graphics
- Full backward compatibility on application level

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

**SUSE Manager for Retail**

**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)

**SDI Management**
- Basic VM management

**Monitoring**
- Prometheus/Grafana based monitoring

**General**
- Usability improvements
- Offline 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**
- Advanced VM management
- Life-cycle management of SAP environments
- Hardware asset management

**Monitoring**
- Support for store infrastructure monitoring

**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**
- 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
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- Support for store infrastructure monitoring

**General**
- PXE with image support
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**Life Cycle**
- Long-term support included

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* 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
### Retail Customers

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Summarize
Retail Solution – Today

SUSE Manager for Retail

SUSE Linux Enterprise
Point of Service

Branches

SUSE Manager Server

KIWI build host

3rd Party Repository

SUSE Customer Center

Custom Repository

Subscription Management Tool

Store A
SUSE Manager for Retail
Branch Server

POS

Store Y
POS

Store Z
POS
Enable retailers to deliver friction-less customer experience that are unified across channels.
Thank You