What’s up with SUSE?

March 11, 2021
Welcome to TriLug!

1. History of SUSE
2. SUSE Linux Distros
3. Other Products
4. Tease about Rancher
Who is this guy?

- Joined SUSE in March 2018
- Formerly with Western Digital, SanDisk, Fusion-io, SteelEye Tech., Sun Microsystems, Lockheed
- MS Computer Science, West Virginia
- Attending TriLug since 2007
- Takes care of his wife's chickens....
What means SUSE?
S.u.S.E.

Roland Dyroff, Thomas Fehr, Burchard Steinbild and Hubert Mantel found S.u.S.E., 1992.

SUSE is a German acronym for "Software und System-Entwicklung" (software and systems development).

Softlanding Linux System (SLS) was one of the earliest Linux distros. (Slackware was initially based on SLS)

First true S.u.S.E. Linux distro was 4.2, in 1996.
How is SUSE pronounced?
Brief History of SUSE
# 28 Years of Leadership in True Open Source

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992 to 2000</td>
<td>The Pioneering Years</td>
</tr>
<tr>
<td>2001 to 2010</td>
<td>Becoming strategic partner of SAP and building a strong ecosystem</td>
</tr>
<tr>
<td>2011 to Present</td>
<td>Enabling an Always Open Data Center</td>
</tr>
<tr>
<td>2017 to Present</td>
<td>From Linux Pioneer to Software-Defined Infrastructure and Edge</td>
</tr>
</tbody>
</table>

## Important Milestones

- **1992**: SUSE brings Linux to the enterprise
- **2008**: Joint innovation with SAP
- **2010**: Linux-based solution with AWS
- **2019**: Partnership with EQT
- **2020**: Acquires Rancher Labs
- **2020**: SUSE celebrates first year of independence

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SuSE Linux 6.4 (circa 2000)

Hardware Requirements

• 486DX
• Min 16MB RAM, for GUI 32 MB Minimum
• 140 MB Disk, 600 MB Recommended
SUSE Linux Distros
3 Types of Linux Distributions

Really defined by their Release Cycles

Rolling Release
Release as soon as possible

Regular
Release twice a year...

Long Term / Enterprise
Slow (yearly?), small changes in sub releases
SUSE has two of the three types...

- **Rolling**
  - OpenSUSE Tumbleweed, Arch, Manjaro, Gentoo

- **Regular**
  - Ubuntu, Fedora, Debian

- **Long Term**
  - OpenSUSE Leap, Ubuntu LTS, SUSE Linux Enterprise, RHEL, CentOS
SUSE has a tight bond between the three distros

openSUSE & SLE - Developed together

openSUSE Tumbleweed

Factory

Code Freeze

Leap 15.0
+ SLE 15

Leap 15.1
+ SLE 15 SP1

Leap 15.2
+ SLE 15 SP2

Leap 15.3
+ SLE 15 SP3
Current Build Method...

How we built openSUSE & SLE so far

openSUSE Tumbleweed

Code Freeze

Packages sources

Different Build

SLE 15 SP2

Package Hub

openSUSE Leap 15.2

SLE 15 SP2 and Leap 15.2 share the same sources but may have different binaries rpm.

SLE 15 SP2 packages list is used as openSUSE Leap 15.2 core packages
Where we are heading…

Upcoming changes to how openSUSE & SLE are build

openSUSE Tumbleweed

Code Freeze

Packages sources

Build

SLE 15 SP3
Package Hub

openSUSE Leap branding and product config

openSUSE Leap 15.3
Release Cycle

**Tick – Tock**
- SUSE is following a Tick-Tock approach for releases.

**Tick – odd versions**
- Bugfixes and maintenance updates
- Improvements for existing features
- Feature parity with recent SUSE Linux Enterprise Release
- Selected features

**Tock – even versions**
- All from Tick-Release
- Kernel version bump
- Stack upgrade
13 years total lifecycle
Updates to next service pack (n+1)
Service Pack Overlap Support: 6 months
Long Term Service Pack Support: up to 3 years after generic end of support
SP6 under evaluation at time of SP5 decision
Open, Interoperable Approach to Hybrid Cloud Infrastructure

SUSE Rancher
Industry’s only platform to manage all Kubernetes distributions

SUSE Linux Enterprise Product Family
Industry’s only adaptable Linux operating system

SLE Desktop / POS
SLE Server
SLE HPC
SLE Micro
SLE Extensions
SUSE Manager

Hybrid Cloud Infrastructure
Dev
Datacenter
Cloud
Branch
Edge
A long lifecycle balances innovation and stability

Available for all SUSE Linux Enterprise Server for SAP Applications 12 and 15 service packs.

See www.suse.com/lifecycle for specific release and end of support dates.

1Available for all SUSE Linux Enterprise Server for SAP Applications 12 and 15 service packs.
Automate SAP HANA System Replication to recover faster

- **Performance-optimized**
  - Node 1: SAP HANA (PR1) primary
  - Node 2: SAP HANA (PR1) primary
  - Chain Topology: Active/Active

- **Cost-optimized**
  - Node 1: SAP HANA (PR1) primary
  - Node 2: SAP HANA (PR1) secondary
  - Scale out: Active/Active

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How does live kernel patching work?

1. Replace the placeholder “noop” with a call to ftrace.

2. ftrace returns execution to a new “patched” Function.

Before patching:

- call to `noop`
- return from `noop`

After patching:

- call to new function
- return from new function

Old Function is bypassed, and New Function is now in use.
<table>
<thead>
<tr>
<th>System Name</th>
<th>Updates</th>
<th>Patches</th>
<th>Packages</th>
<th>Config Diffs</th>
<th>Basic Channel</th>
<th>System Type</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
<td>0</td>
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<td>1</td>
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<td>0</td>
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<td>79</td>
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<td>NC node3</td>
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<td>198</td>
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Brief Intro into Rancher

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Rancher enables production quality Kubernetes everywhere.
SUSECON Digital: Bringing the best of enterprise Linux, Kubernetes management and edge solutions to wherever you are

May 18–20, 2021

Save the date! Registration opens March 15, 2021.
Resources


https://www.opensuse.org/

https://rancher.com/

https://suse.com/lifecycle/
Thank you

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