



Top 25 New Features in (Auto)YaST

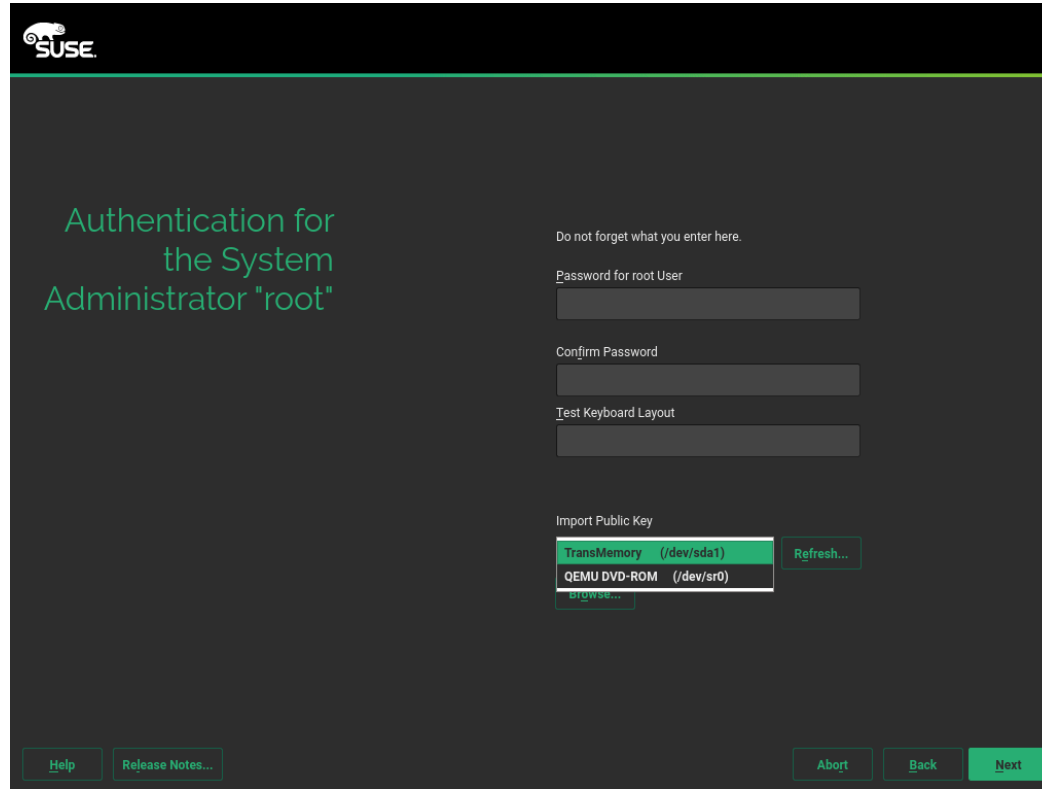
2020



Passwordless SSH Authentication

- Installation: SSH-based root authentication
- System: management of SSH keys for users
- Introduced in 15.1

Passwordless SSH Authentication



The screenshot shows the SUSE installer's authentication screen. On the left, the text "Authentication for the System Administrator 'root'" is displayed in a light blue font. On the right, there are several input fields: "Password for root User", "Confirm Password", and "Test Keyboard Layout". Below these is a section for "Import Public Key" with a list of entries: "TransMemory (/dev/sda1)", "QEMU DVD-ROM (/dev/sr0)", and "sigwe...". A "Refresh..." button is next to the list. At the bottom, there are buttons for "Help", "Release Notes...", "Abort", "Back", and "Next". The SUSE logo is in the top left corner.

SUSE

Authentication for
the System
Administrator "root"

Do not forget what you enter here.

Password for root User

Confirm Password

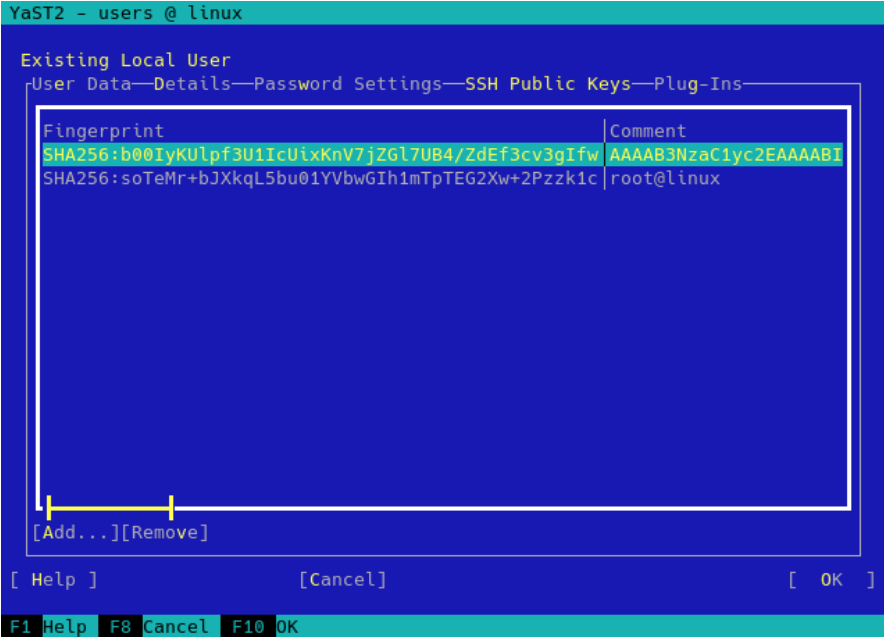
Test Keyboard Layout

Import Public Key

TransMemory	(/dev/sda1)	Refresh...
QEMU DVD-ROM	(/dev/sr0)	
sigwe...		

Help Release Notes... Abort Back Next

Passwordless SSH Authentication

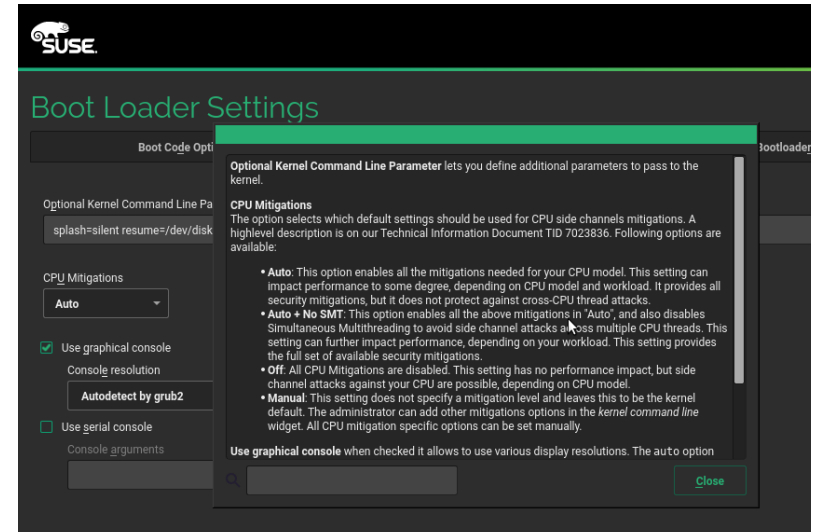
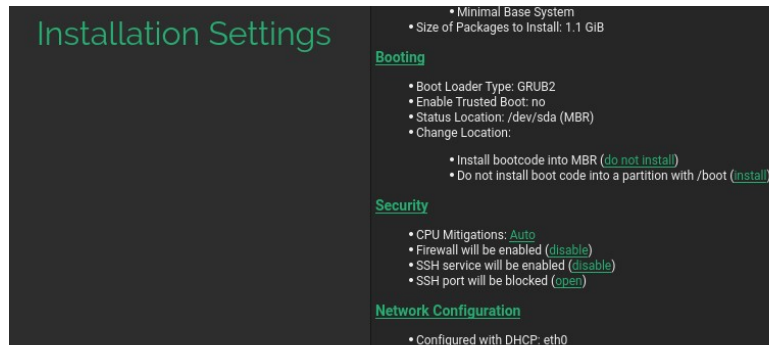


The screenshot shows the YaST2 configuration window for SSH Public Keys. The window title is "YaST2 - users @ linux". The main title is "Existing Local User". Below the title, there are tabs for "User Data", "Details", "Password Settings", "SSH Public Keys", and "Plug-Ins". The "SSH Public Keys" tab is active, showing a table of public keys. The table has two columns: "Fingerprint" and "Comment". The first row is highlighted in green and shows a SHA256 fingerprint and a comment. The second row shows another SHA256 fingerprint and the comment "root@linux". At the bottom of the table, there are buttons for "[Add...]" and "[Remove]". At the bottom of the window, there are buttons for "[Help]", "[Cancel]", and "[OK]". At the very bottom, there is a status bar with "F1 Help", "F8 Cancel", and "F10 OK".

```
YaST2 - users @ linux
Existing Local User
User Data—Details—Password Settings—SSH Public Keys—Plug-Ins—
Fingerprint                                     Comment
SHA256:b00IyKULpf3U1IcUixKnV7jZGl7UB4/ZdEf3cv3gIfw AAAAB3NzaC1yc2EAAAABI
SHA256:soTeMr+bJXkqL5bu@1YVbwGIh1mTpTEG2Xw+2Pzzk1c root@linux
[Add...][Remove]
[ Help ] [Cancel] [ OK ]
F1 Help F8 Cancel F10 OK
```

Mitigation of CPU Vulnerabilities

- Easy configuration of protection against Spectre and Meltdown
- Adjustable in YaST Bootlader
- Configurable during installation
- Introduced in 15.1
- Backported to 15.0



Improved Services Management

- Introduced in 15.1

The screenshot displays the 'Services Manager' application window. At the top, there is a 'Default System Target' dropdown menu set to 'Graphical Interface'. Below this is a table listing various system services. The 'iscsiuio' service is highlighted in blue. A dialog box titled 'YaST2 - services-manager @ linux-rijh' is overlaid on the table, showing a 'Summary of changes' with the following text:

Default target will be changed to 'Graphical Interface'

The following services(1) will be stopped:
cups

The following services(2) will be configured to start on demand:
cups, iscsi

The following services(1) will be configured to start manually:
iscsi

At the bottom of the dialog box are 'Yes' and 'No' buttons. The main window also features buttons for 'Start', 'Start Mode', 'Help', 'Cancel', 'Apply', and 'OK' at the bottom.

Service	Start	State	Description
firewalld	Manually	Inactive (Dead)	firewalld - dynamic firewall daemon
fstrim			
getty@tty1			
getty@tty7			
gpm			
grub2-once			
halt			
halt-local			
haveged			
initrd-cleanup			
initrd-parse-etc			
initrd-switch-root			
initrd-udevadm-cleanup-db			
irqbalance			
iscsi			
iscsid			
iscsiuio			
isnsd			
issue-add-ssh-keys			
issue-generator			
kadmind			
kbdsettings			
kexec-load	Manually	Inactive (Dead)	load default kernel into the current kernel
klogd	Manually	Inactive (Dead)	System Kernel Logging Service
kmod-static-nodes	Manually	Active (Exited)	Create list of required static device nodes for the current kernel
kpropd	Manually	Inactive (Dead)	Kerberos 5 Propagation
krb5kdc	Manually	Inactive (Dead)	Kerberos 5 KDC
lifecycle-report	Manually	Inactive (Dead)	Report changes in product/package lifecycle

Bcache Management

- Introduced in 15.1

System View

- linux-rijh
 - Hard Disks
 - vda
 - vda1
 - vda2
 - vdb
 - vdc
 - vdd
 - vdd1
 - vdd2
 - vdd3
 - RAID
 - Volume Management
 - my_vg
 - bcache2
 - Bcache**
 - bcache0
 - bcache0p1
 - bcache1
 - bcache2
 - bcache2p1
 - NFS
 - Btrfs
 - Device Graphs
 - Installation Summary
 - Settings

Bcache

Bcache Devices					Caching Set Devices				
Device	Size	F	Enc	Type	FS Type	Label	Mount Point	Start	End
/dev/bcache0	5.00 GiB			Bcache				0	10485
/dev/bcache0p1	0.93 GiB			Linux Native	Ext4		/mnt	34	1953
/dev/bcache1	94.99 MiB			Bcache				0	194
/dev/bcache2	51.99 MiB			Bcache				0	106
/dev/bcache2p1	51.02 MiB			Linux Native	XFS		/mnt3	34	104

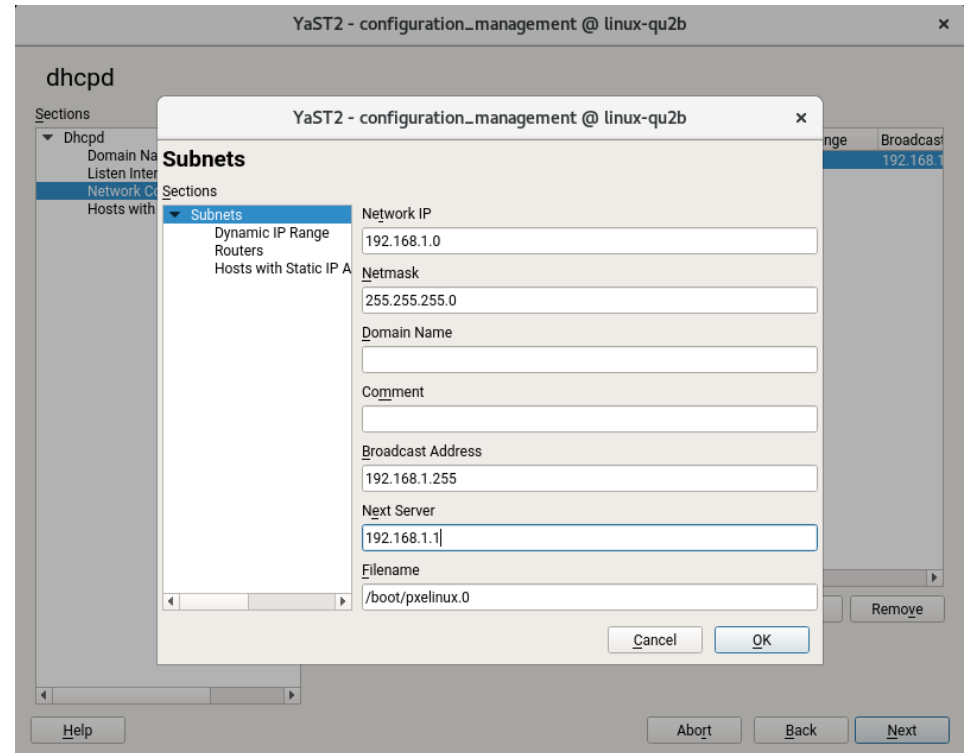
Modify | Partitions | Delete

- Edit Bcache...
- Change Caching...**
- Create New Partition Table...

Add Bcache... | Abort | Finish

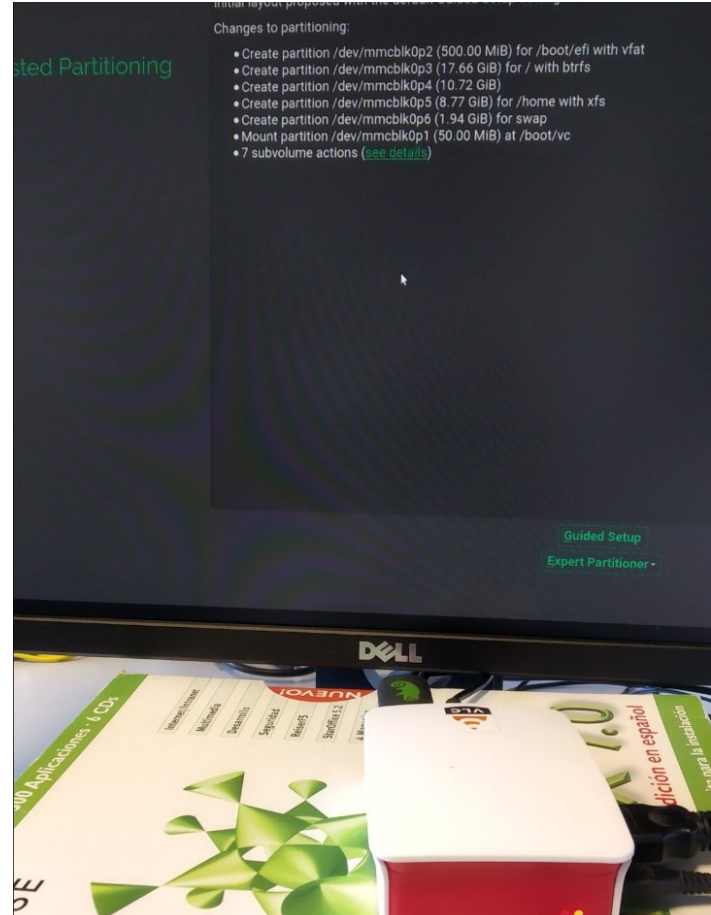
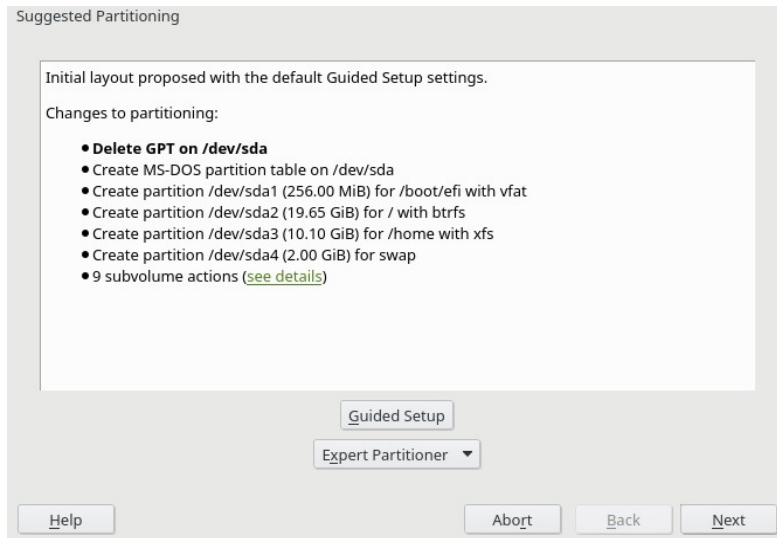
More Powerful Configuration Management

- Updated support for SUMA Salt Parametrizable Formulas
- Firstboot support
- Introduced in 15.1



Installer Support for Raspberry Pi

- Introduced in 15.1
- Improved in 15.2



Firewalld configuration

- Introduced in 15.1
- Improved in 15.2

YaST2 - firewall @ vikingo-laptop

Adding new zone

Name
custom

Short
custom

Description
This is my custom zone

Target
default

IPv4 Masquerade

Help Cancel OK

YaST2 - firewall @ linux-tdi6

Firewall

System View

- Start-Up
- Interfaces
- Zones
 - block
 - dmz**
 - drop
 - external
 - home
 - internal
 - public
 - trusted
 - work

Services

Known

Name

- amanda-client
- amanda-k5-client
- amqp
- amqps
- apcupsd
- bacula
- bacula-client
- bgp
- bitcoin
- bitcoin-rpc
- bitcoin-testnet
- bitcoin-testnet-rpc
- ceph
- ceph-mon
- cfengine
- condor-collector
- ctdb
- dhcp
- dhcpv6

Ports

Allowed

Name

- ssh

Add →

Add All →

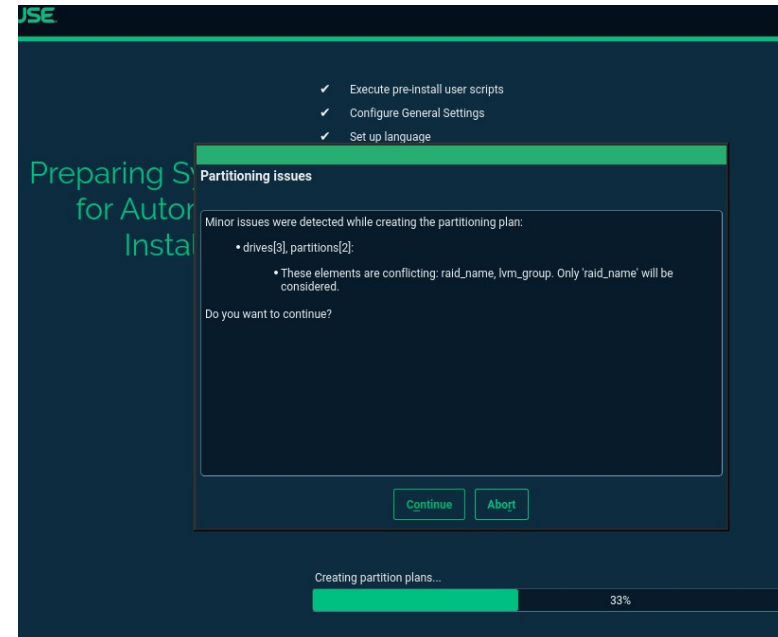
← Remove

← Remove All

Help Abort Accept

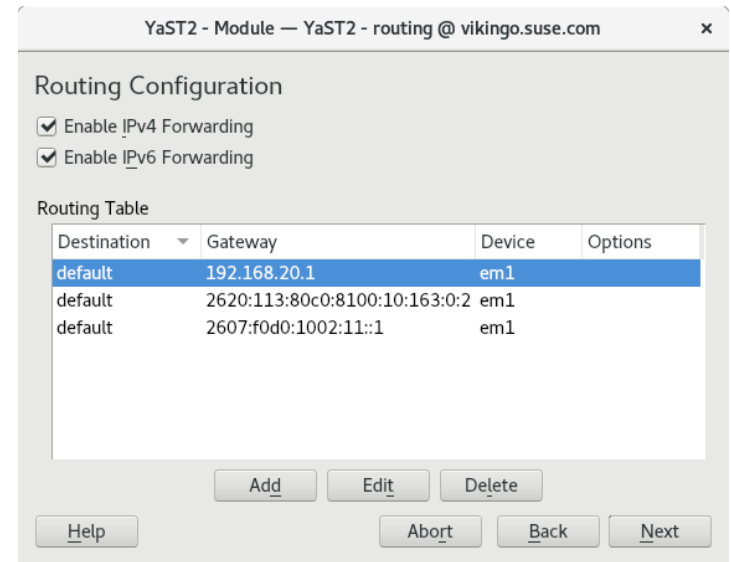
Better error reporting in AutoYaST

- Introduced in 15.1
 - General mechanism, errors reported early
 - Basic checks for <partitioning>
- Introduced in 15.2
 - Advanced consistency checks for <partitioning>
 - Network-related checks
 - Firewall checks



Improvements in Several Network Screens

- Wireless configuration (simplified workflow + specific tab)
- Improved overview of bonds and bridges
- Completely revamped UI for routing
- Better support for s390 systems
- Better udev rule handling
- Introduced in 15.2



Multi-device Btrfs

- Introduced in 15.2

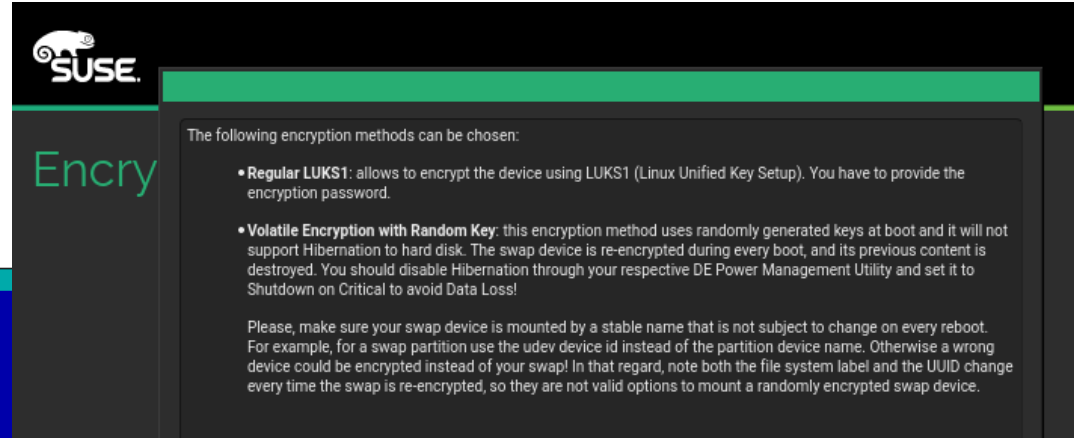
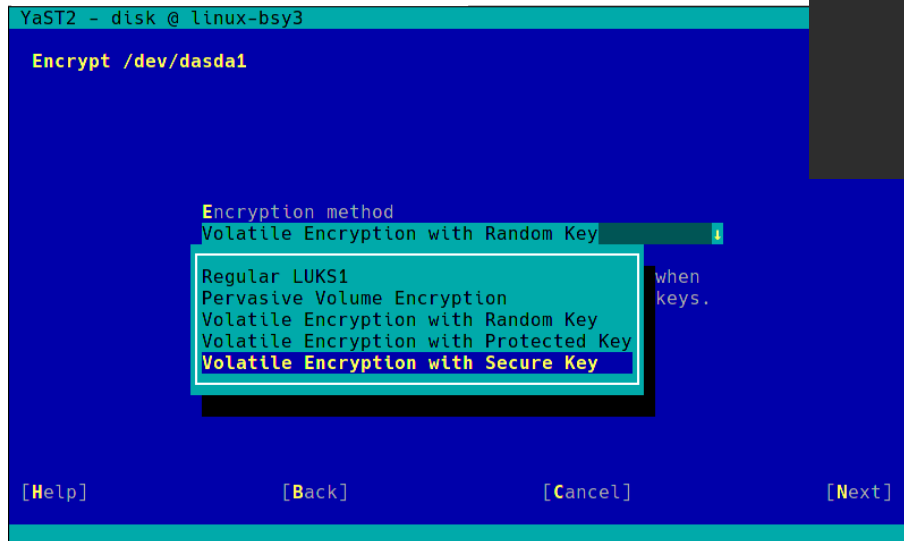
The screenshot displays the System View interface for configuring a Btrfs filesystem. The left sidebar shows the system tree with 'Btrfs (sdb1...)' selected. The main window is titled 'Btrfs (sdb1...)' and has two tabs: 'Overview' and 'Used Devices'. The 'Overview' tab contains a table of devices:

Device	Size	F	Enc	Type
/dev/sdb1	2.00 GiB			Part of Btrfs (sdb1...)
/dev/sdc1	2.00 GiB			Part of Btrfs (sdb1...)
/dev/sdd1	2.00 GiB			Part of Btrfs (sdb1...)
/dev/sde1	2.00 GiB			Part of Btrfs (sdb1...)

An 'Add Btrfs' dialog box is open, showing configuration options. The 'RAID Level' is set to 'Default', and the 'RAID Level for Metadata' dropdown is open, with 'SINGLE' selected. The 'Available Devices' list includes /dev/sda3 (2.00 GiB). At the bottom right of the dialog are buttons for 'Add ->', 'Add All ->', '- Remove', and '- Remove All'.

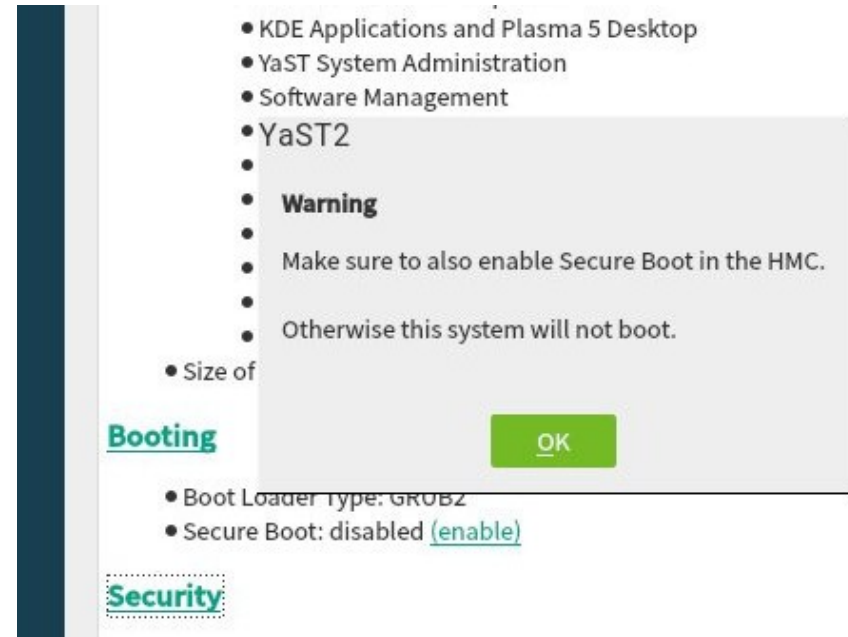
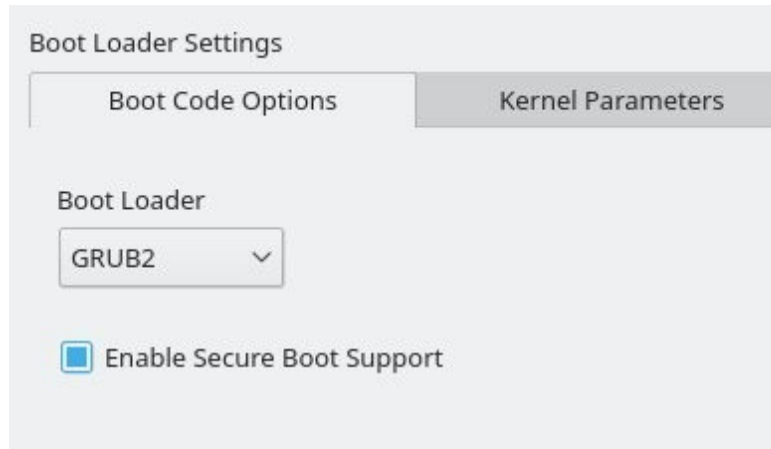
Advanced Encryption Features

- Introduced in 15.2



Secure Boot Support for IBM zSeries

- Special feature available only in some recent mainframes
- Unified interface with UEFI Secure Boot
- Introduced in 15.2

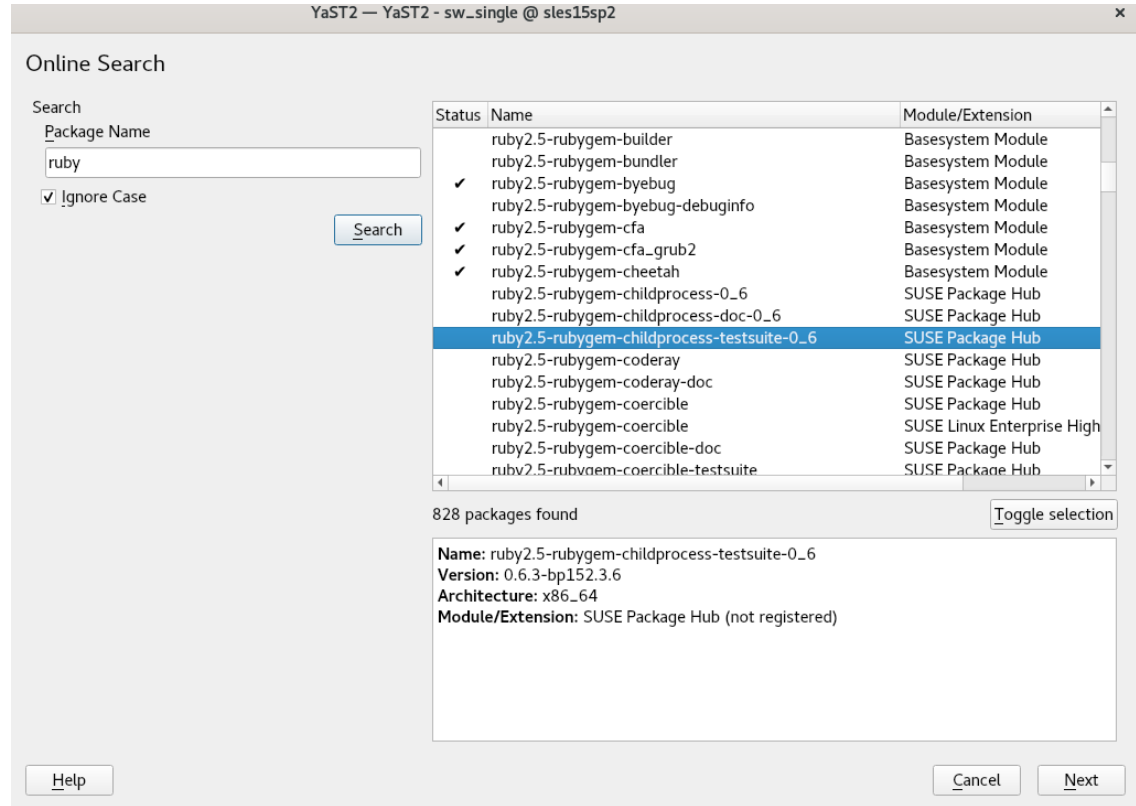


Improved Compatibility with WSL

- Windows Subsystem for Linux
- Only WSL1 so far
- Firstboot does not try to use systemd
- Firstboot can be used to register the system
- The control center only displays working modules
- Introduced in 15.2

Online Search for SUSE Linux Enterprise

- Introduced in 15.2



The screenshot shows the YaST2 Online Search window. The search term 'ruby' is entered in the 'Package Name' field. The search results are displayed in a table with columns for Status, Name, and Module/Extension. The package 'ruby2.5-rubygem-childprocess-testsuite-0_6' is selected and highlighted in blue. Below the table, it indicates that 828 packages were found. A detailed view of the selected package is shown below the table, including its name, version, architecture, and module/extension.

Status	Name	Module/Extension
	ruby2.5-rubygem-builder	Basesystem Module
	ruby2.5-rubygem-bundler	Basesystem Module
✓	ruby2.5-rubygem-byebug	Basesystem Module
	ruby2.5-rubygem-byebug-debuginfo	Basesystem Module
✓	ruby2.5-rubygem-cfa	Basesystem Module
✓	ruby2.5-rubygem-cfa_grub2	Basesystem Module
✓	ruby2.5-rubygem-cheetah	Basesystem Module
	ruby2.5-rubygem-childprocess-0_6	SUSE Package Hub
	ruby2.5-rubygem-childprocess-doc-0_6	SUSE Package Hub
	ruby2.5-rubygem-childprocess-testsuite-0_6	SUSE Package Hub
	ruby2.5-rubygem-coderay	SUSE Package Hub
	ruby2.5-rubygem-coderay-doc	SUSE Package Hub
	ruby2.5-rubygem-coercible	SUSE Package Hub
	ruby2.5-rubygem-coercible	SUSE Linux Enterprise High
	ruby2.5-rubygem-coercible-doc	SUSE Package Hub
	ruby2.5-rubygem-coercible-testsuite	SUSE Package Hub

828 packages found Toggle selection

Name: ruby2.5-rubygem-childprocess-testsuite-0_6
Version: 0.6.3-bp152.3.6
Architecture: x86_64
Module/Extension: SUSE Package Hub (not registered)

Buttons: Help, Cancel, Next

YaST NTP Client & Systemd

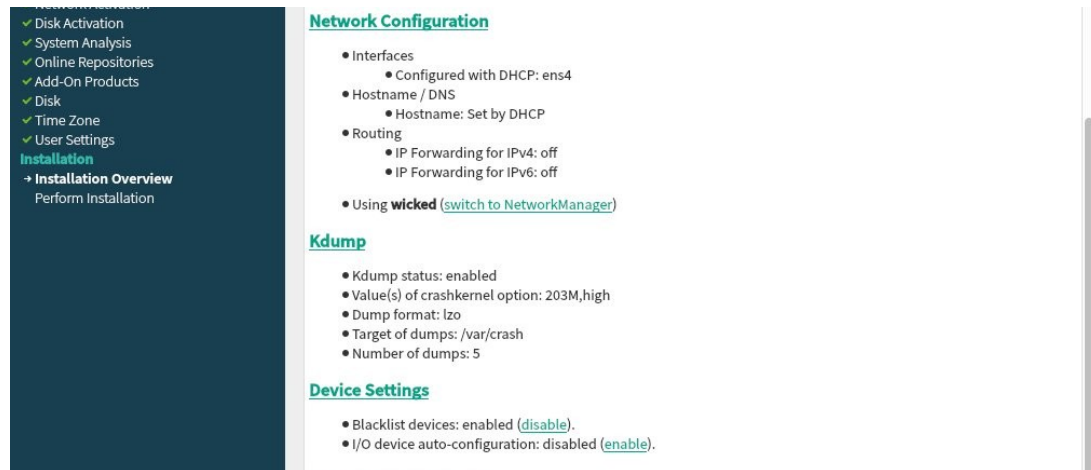
- Use a new systemd timer
- No more cron
- The new timer conflicts with the chrony daemon
- Introduced in 15.2

Split of Configuration Files

- Helping users to cope with the new “/etc + /usr/etc” layout
- Better overview of all the /etc/something.d/ directories
- Consolidate files and represent current active settings
- Write to sensible files (eg. /etc/sysctl.d/70-yast.conf)
- Introduced in 15.2 (sysctl, logins.defs)
- Continuously improving in Tumbleweed

I/O device auto-configuration for zSeries

- Special feature available only in some recent IBM mainframes
- Introduced in SLE-15-SP2 quarterly update
- Also available in Tumbleweed

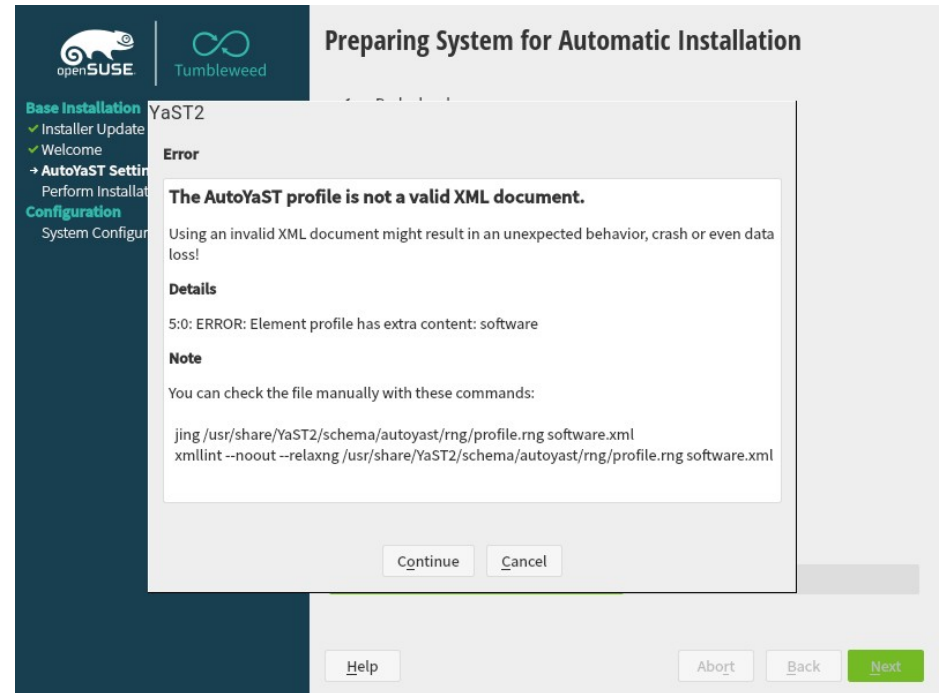


The screenshot displays the YaST configuration interface for Network Configuration. The left sidebar shows a navigation menu with options like Disk Activation, System Analysis, Online Repositories, Add-On Products, Disk, Time Zone, User Settings, and Installation. The main content area is titled 'Network Configuration' and contains the following settings:

- Network Configuration**
 - Interfaces
 - Configured with DHCP: ens4
 - Hostname / DNS
 - Hostname: Set by DHCP
 - Routing
 - IP Forwarding for IPv4: off
 - IP Forwarding for IPv6: off
 - Using **wicked** ([switch to NetworkManager](#))
- Kdump**
 - Kdump status: enabled
 - Value(s) of crashkernel option: 203M,high
 - Dump format: lzo
 - Target of dumps: /var/crash
 - Number of dumps: 5
- Device Settings**
 - Blacklist devices: enabled ([disable](#)).
 - I/O device auto-configuration: disabled ([enable](#)).

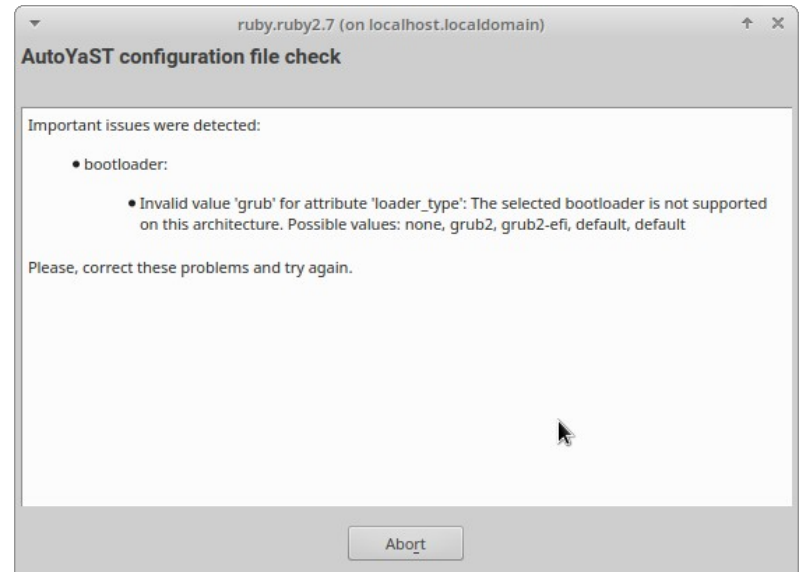
AutoYaST Profile: Better XML Parser

- More precise conversion XML ↔ data
- Accurate error reporting
- Optional concise syntax
- Integrated validation
- Only Tumbleweed so far



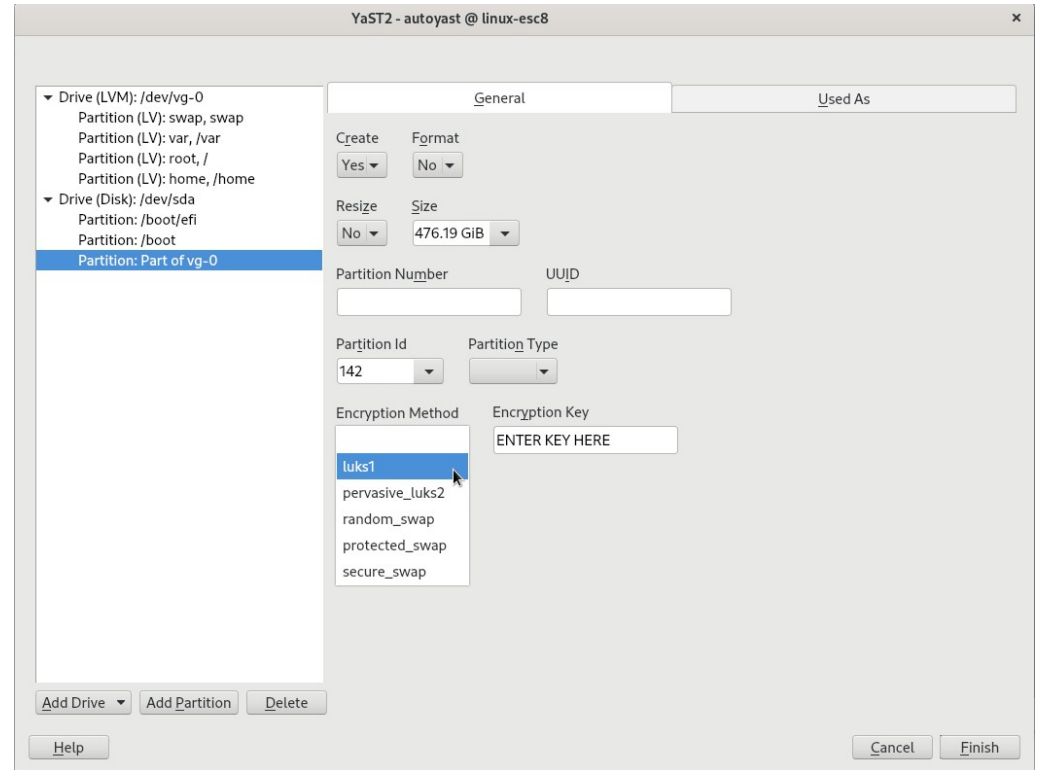
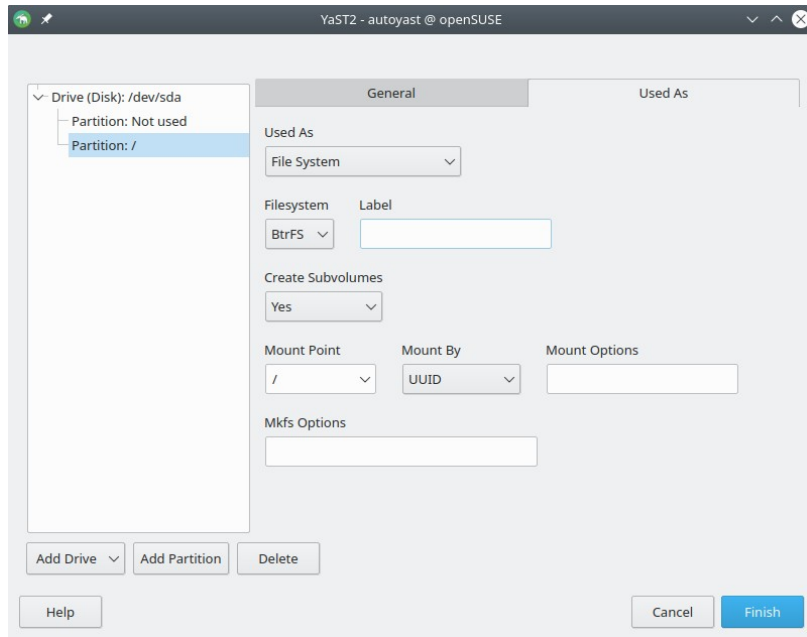
Dynamic AutoYaST Profiles with ERB

- Compatible with AutoYaST pre-scripts
- Helpers: disks, network_cards, os_release
- Test client for dynamic profiles
 - Profile fetching
 - Rules&classes, pre-scripts, ERB
 - XML syntax and schema checks
- Only Tumbleweed so far



AutoYaST UI: Editing Drives

- Only Tumbleweed so far

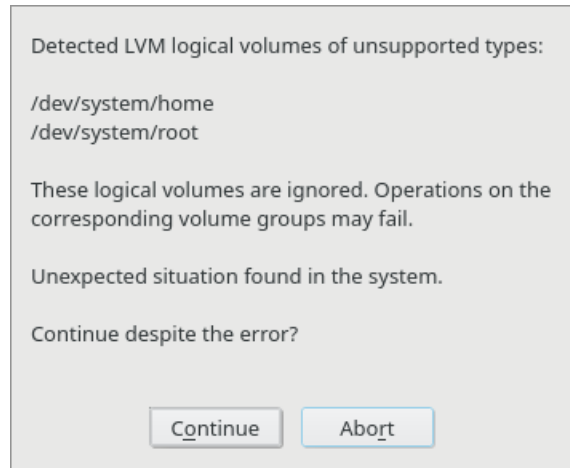


Exporting a Reduced AutoYaST Profile

- `yast2 clone_system [modules] target=compact`
 - YaST Users: do not export non-system users
 - YaST Firewall: export only modified zones
 - YaST Services Manager: export only changed services
 - ...
- Only Tumbleweed so far

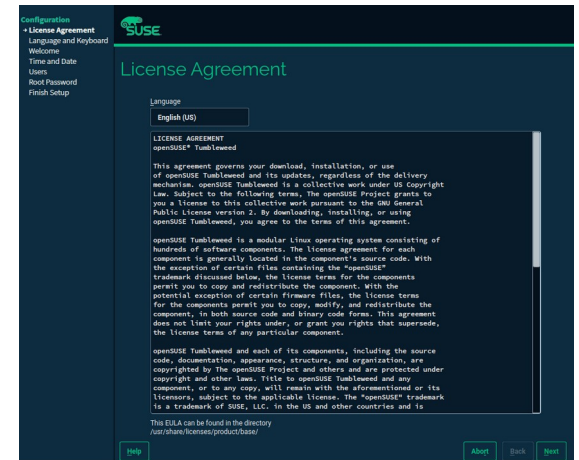
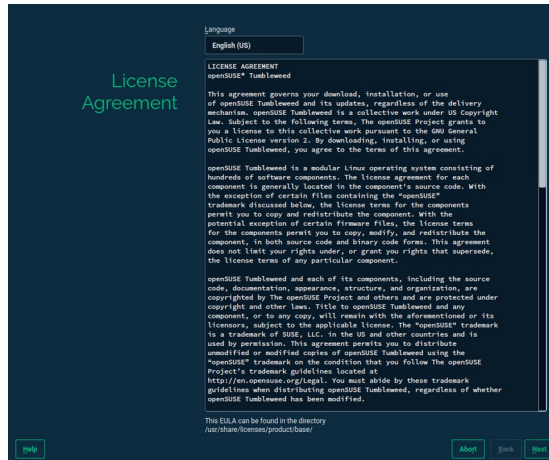
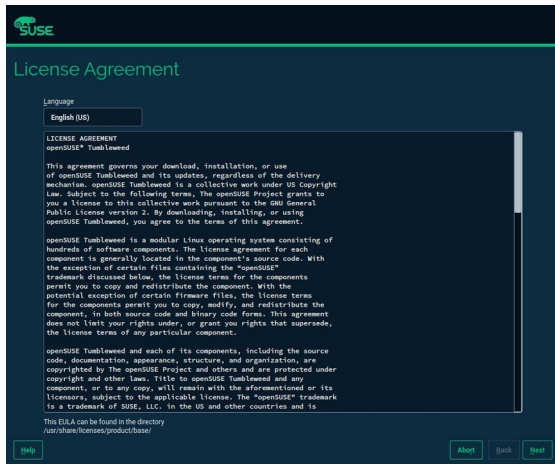
Recognizing LVM Advanced Features

- No more warnings like this for:
 - LVM Cache
 - LVM RAID
 - Mirror logical volumes
 - LVM Snapshots (both thick and thin)
- Correct visualization (with relatively limited operation)
- Possible to upgrade a system
- Only Tumbleweed so far



Look&Feel for Installer and YaST Firstboot

- Unified
- More configurable
- Only Tumbleweed so far



Improved Partitioner Interface

The screenshot displays a graphical user interface for a partitioning tool. On the left, a tree view under 'All Devices' shows categories like Hard Disks, RAID, LVM Volume Groups, Bcache Devices, Btrfs, and NFS. The main area is a table listing various storage components. The table has columns for Device, Size, File System (F), Enclosure (Enc), Type, Label, and Mount Point. The device /dev/sda is expanded to show its partitions: sda1 (500.00 MiB, Part of EFI), sda2 (7.51 GiB, Part of OS), and /dev/sdb (468.00 GiB, Disk). /dev/sdb is further expanded to show sdb1 (500.00 MiB, Part of EFI) and sdb2 (467.51 GiB, Part of OS). /dev/sdc (2.00 TiB, Disk) is expanded to show sdc1 (12.00 GiB, FAT Partition, Label: CRAYINSTALL, Mount: /var/cray/v), sdc2 (0.88 TiB, PV of system), sdc3 (100.00 GiB, Ext4 Partition, Label: CRAYNFS, Mount: /var/lib/nfs), and sdc4 (1.01 TiB, Ext4 Partition, Label: CRAYK8S, Mount: /var/lib/cra). /dev/system (0.89 TiB, LVM) is expanded to show the root directory (0.89 TiB, Btrfs LV) and its subvolumes: @/home (Btrfs Subvolume, /home), @/opt (Btrfs Subvolume, /opt), @/root (Btrfs Subvolume, /root), and @/usr (Btrfs Subvolume, /usr).

Device	Size	F	Enc	Type	Label	Mount Poi
/dev/md/EFI	492.13 MiB			FAT RAID		/boot/efi
/dev/md/OS	7.39 GiB			PV of system		
▼ /dev/sda	8.00 GiB			HGST-HGST HTS7...		
sda1	500.00 MiB			Part of EFI		
sda2	7.51 GiB			Part of OS		
▼ /dev/sdb	468.00 GiB			Disk		
sdb1	500.00 MiB			Part of EFI		
sdb2	467.51 GiB			Part of OS		
▼ /dev/sdc	2.00 TiB			Disk		
sdc1	12.00 GiB			FAT Partition	CRAYINSTALL	/var/cray/v
sdc2	0.88 TiB			PV of system		
sdc3	100.00 GiB			Ext4 Partition	CRAYNFS	/var/lib/nfs
sdc4	1.01 TiB			Ext4 Partition	CRAYK8S	/var/lib/cra
▼ /dev/system	0.89 TiB			LVM		
▼ root	0.89 TiB			Btrfs LV		/
@/home				Btrfs Subvolume		/home
@/opt				Btrfs Subvolume		/opt
@/root				Btrfs Subvolume		/root
@/usr				Btrfs Subvolume		/usr

Buttons at the bottom: Edit..., Add Partition..., Help, Abort, Next.

2020



Thank You



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