

Manuelles Installieren von SUSE Linux Enterprise Server mit Agama

WAS?

In diesem Artikel wird beschrieben, wie Sie SUSE Linux Enterprise Server mithilfe von Agama installieren. Die hier aufgeführten Informationen gelten für die Installation der Produkte sowohl auf Bare-Metal- als auch auf virtuellen Maschinen.

WARUM?

Lesen Sie diesen Artikel, um mehr über die Installation von SUSE Linux Enterprise Server mit Agama zu erfahren.

AUFWAND

Sie benötigen etwa 15 Minuten, um diesen Artikel zu lesen.

ZIEL

Erfahren, wie Sie SUSE Linux Enterprise Server mithilfe von Agama manuell installieren.

ANFORDERUNGEN

Ein Bare-Metal-Server oder eine virtuelle Maschine. Für

- Serverinstallationen ohne Desktop-Umgebung empfiehlt SUSE mindestens 1 CPU, 2 GB Arbeitsspeicher und 32 GB Speicher (einschließlich Speicherplatz für Btrfs-Snapshots in der Root-Partition, Swap-Space und Speicher für Softwarepakete).

Ein aktiver Registrierungscode für das Produkt, das Sie

- installieren möchten. Sie können im SUSE Customer Center einen Registrierungscode für das Produkt generieren und das Abonnement für Ihr Unternehmen aktivieren.



Anmerkung: Optionale Registrierung

Bei bestimmten Bildern, die mit dem Schlüssel des Entwicklers signiert sind, können Sie die Registrierung vor oder während der Installation überspringen. Außerdem können bestimmte Images alle installierbaren Pakete für Ihr Betriebssystem enthalten, die Sie als Offline-Paket-Repository verwenden können. In solchen Fällen benötigen Sie vor der Installation möglicherweise keinen aktiven Registrierungscode. Wenn Sie jedoch Softwarepakete aus den offiziellen Online-Repositorys verwenden, empfiehlt SUSE, Ihr Produkt beim SUSE Customer Center zu registrieren.

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1 Einführung in Agama

Dieser Abschnitt bietet einen kurzen Überblick über Agama, das Standardinstallationsprogramm für SUSE Linux Enterprise Server 16.0 und spätere Versionen.

1.1 Was ist Agama?

Agama ist ein flexibles und leistungsstarkes Open Source-Installationsprogramm, das von SUSE entwickelt wurde. Sie können es verwenden, um unterstützte SUSE Linux Enterprise Server-Versionen auf einer Vielzahl von Computerarchitekturen manuell oder automatisiert zu installieren. Die auf Agama basierende Installationsmethode bietet eine intuitive Oberfläche für *sofort einsatzbereite* Images für verschiedene Anwendungsfälle und Workloads. In Kombination mit Cockpit und Ansible ersetzt es YaST in SUSE Linux Enterprise Server.

2 Installieren von SUSE Linux Enterprise Server mit Agama

In diesem Abschnitt wird beschrieben, wie SUSE Linux Enterprise Server mithilfe der auf Agama basierenden ISO-Image-Datei installiert wird.

2.1 Einführung

In den folgenden Abschnitten wird das auf Agama basierende manuelle Installationsverfahren für SUSE Linux Enterprise Server beschrieben. Die Informationen gelten sowohl für die Installation auf Bare-Metal- als auch auf virtuellen Maschinen.

2.2 Anforderungen

- Eine auf Agama basierende ISO-Image-Datei für unterstützte Versionen von SUSE Linux Enterprise Server. Sie können diese von SUSE Customer Center herunterladen und die Prüfsumme überprüfen, um die Integrität sicherzustellen.



Anmerkung: Verfügbare Images für Produkte

Das auf Agama basierende Installations-Image ist für SUSE Linux Enterprise Server 16.0 und spätere Versionen verfügbar.

2.3 Manuelles Installieren von SUSE Linux Enterprise Server für ppc64le mit Agama

Wenn Sie SUSE Linux Enterprise Server mithilfe von Agama manuell installieren möchten, führen Sie die folgenden Schritte aus:

VORGEHEN 1: MANUELLE INSTALLATION VON SUSE LINUX ENTERPRISE SERVER MIT AGAMA

1. Kopieren Sie das ISO-Image auf den VIOS-Server:

```
> scpSLES-Online-16.0-ppc64le-Beta2.install.iso padmin@VIOS_SERVER
```

Ersetzen Sie VIOS_SERVER durch den Hostnamen oder die IP-Adresse Ihres VIOS-Servers.

2. Erstellen Sie ein virtuelles optisches Gerät und laden Sie die ISO-Datei in das virtuelle Gerät auf dem VIOS-Server:

```
(VIOS)$mkvopt -name sles16-offline -file SLES-Online-16.0-ppc64le-Beta2.install.iso  
-ro  
(VIOS)$loadopt -f -release -disk sles16-offline -vtd vcdXY
```

Ersetzen Sie vcdXY durch Ihre virtuelle Geräteeinheit, die an das LPAR angeschlossen ist, das Sie starten möchten.

3. Starten Sie das System vom angeschlossenen virtuellen Gerät aus. Wählen Sie *Boot-Optionen auswählen* > *Installations-/Bootgerät auswählen* > *CD/DVD* > *Alle Geräte auflisten* aus und wählen Sie das virtuelle optische Gerät aus, in dem Sie *Schritt 2* erstellt haben. Wählen Sie dann den *normalen Startmodus* und bestätigen Sie Ihre Auswahl.
4. Melden Sie sich bei der Konsole an, um das Root-Passwort und die IP-Adresse zu erhalten.
 - a. Wählen Sie *agama-Installer* aus und drücken Sie **Eingabetaste**, um das System zu starten.

```
zumbi@shifu: ~  
GNU GRUB version 2.12  
+-----+  
| agama-installer  
| Check Installation Media -- agama-installer  
| local  
| Other options...  
+-----+  
  
Use the ^ and v keys to select which entry is highlighted.  
Press enter to boot the selected OS, 'e' to edit the commands  
before booting or 'c' for a command-line.  
The highlighted entry will be executed automatically in 55s.  
  
109 jostaberry-11 [PowerPC HMC]
```

- b. Wenn der Startvorgang abgeschlossen ist, werden die IP-Adresse und das Root-Passwort angezeigt.

```
zumbi@shifu: ~
[ OK ] Finished Permit User Sessions.
[ OK ] Started Agama Installer Service.
      Starting Agama's D-Bus bus monitor...
      Starting Agama Web Server...
[ OK ] Started Agama's D-Bus bus monitor.
      Starting Generate issue file for Agama SSL certificate...
[ OK ] Started Agama Web Server.
[ OK ] Started Agama automatic profile runner.
      Starting Postpone login prompt aft...L fingerprint issue is generated...
[ OK ] Finished Generate issue file for Agama SSL certificate.
[ OK ] Finished Postpone login prompt aft...SSL fingerprint issue is generated.
[ OK ] Started Getty on tty1.
[ OK ] Started Serial Getty on hvc0.
[ OK ] Reached target Login Prompts.
[ OK ] Reached target Multi-User System.
[ OK ] Reached target Graphical Interface.
      Starting X11 session...
      Starting Service enabling compressing RAM with zRam...
[ 39.519984][ T4578] zram: Added device: zram0
[ 39.523811][ T4571] zram0: detected capacity change from 0 to 133694080
[ OK ] Created slice User Slice of UID 0.
      Starting User Runtime Directory /run/user/0...
[ OK ] Finished User Runtime Directory /run/user/0.
      Starting User Manager for UID 0...
[ 39.609973][ T4588] Adding 66846976k swap on /dev/zram0. Priority:100 extents:1 across:66846976k SS
[ OK ] Finished Service enabling compressing RAM with zRam.
[ OK ] Started User Manager for UID 0.
[ OK ] Started Session 1 of User root.
[ OK ] Started X11 session.

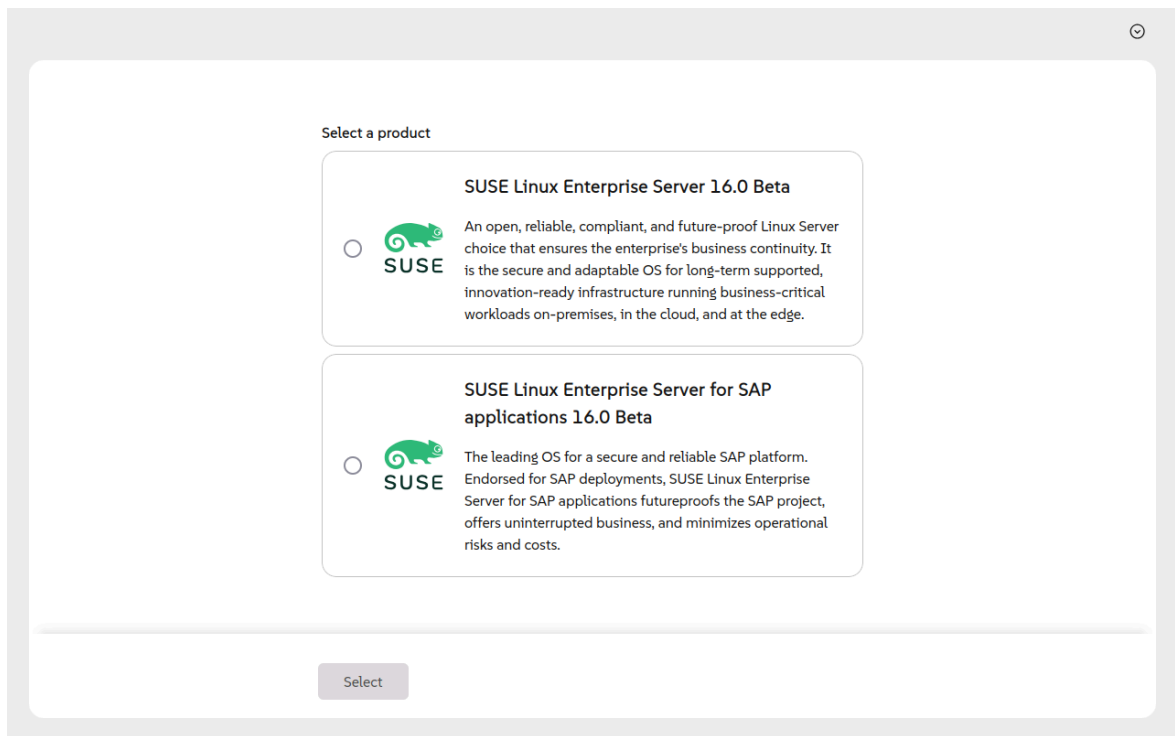
Welcome to Agama installer version 11+105! (hvc0)

SSH host key fingerprints:
SHA256:nUjAtYbVkiw6E9yC+gRKNHA0bUnueLZJ8iI3Ghmy8k (ECDSA)
SHA256:qGExR9jnnCMh7WMOEV8dujDu26HiDID2Mk/5b0cL4g (ED25519)
SHA256:zoEcwrsfa5gxHWhiIKomlm664JTW3kMT0iWKZkrb0k (RSA)

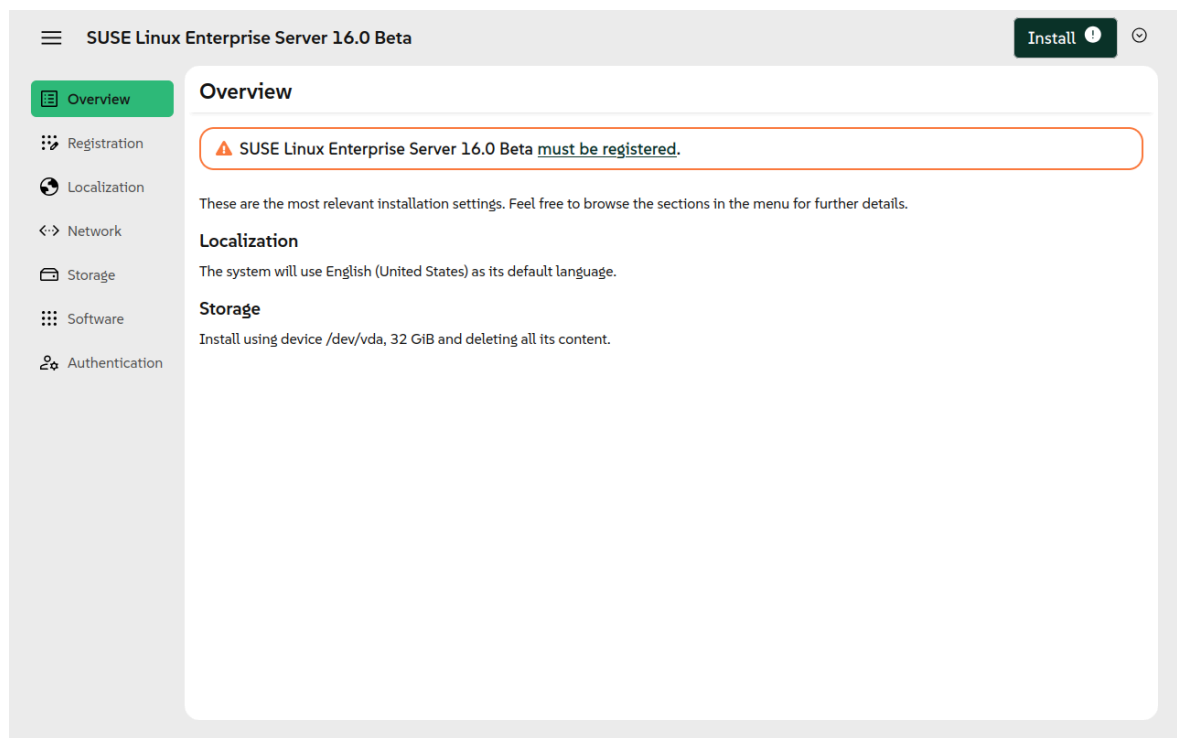
Connect to the Agama installer using these URLs:
https://agama.local
https://10.161.27.65
https://192.168.0.42

Password for root user: eMyYKmhR
jostaberry-11 login:
109 jostaberry-11 [PowerPC HMC]
```

5. Öffnen Sie einen Webbrowser, der auf den angegebenen URL in der Konsole verweist. Geben Sie das root-Passwort ein und fahren Sie mit der Installation fort.
6. Wählen Sie SUSE Linux Enterprise Server 16.0 für die Installation aus und akzeptieren Sie die Lizenz, um fortzufahren.



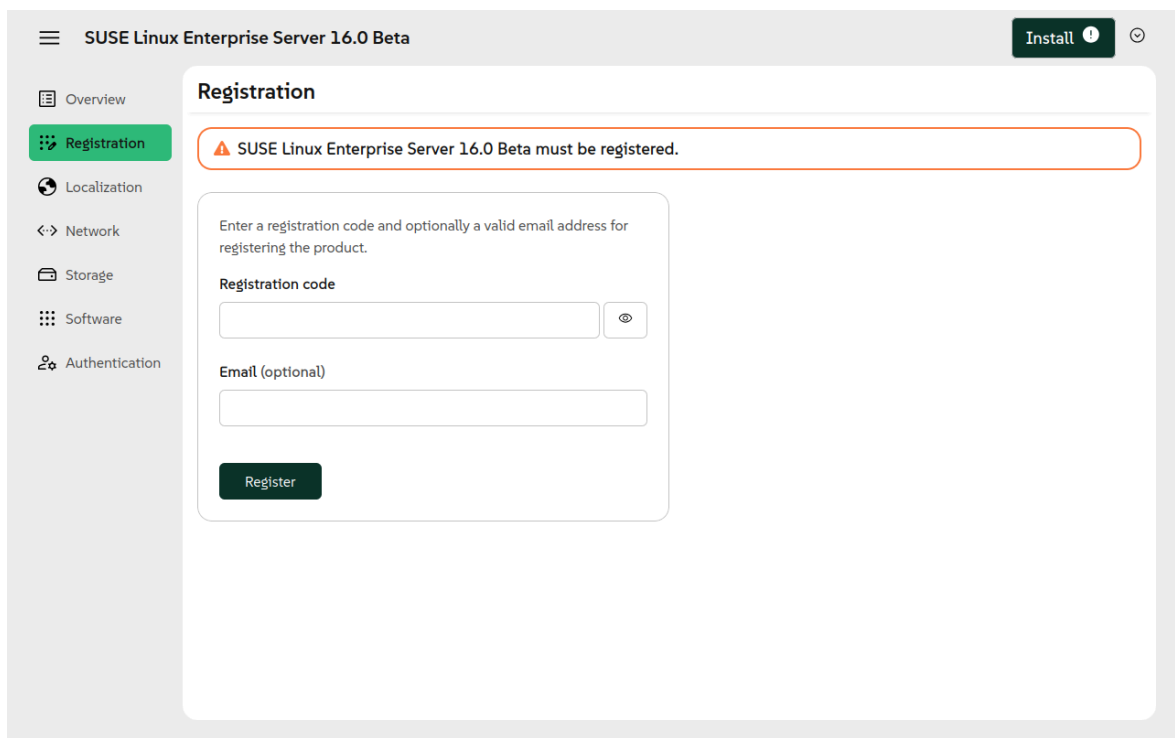
7. Die Übersicht der wichtigsten Installationseinstellungen wird angezeigt. Passen Sie die Einstellungen an, indem Sie die Kategorie aus dem Menü auf der linken Seite auswählen, oder fahren Sie direkt mit der Installation fort.



Tipp: Sprache und Tastatur des Installationsprogramms

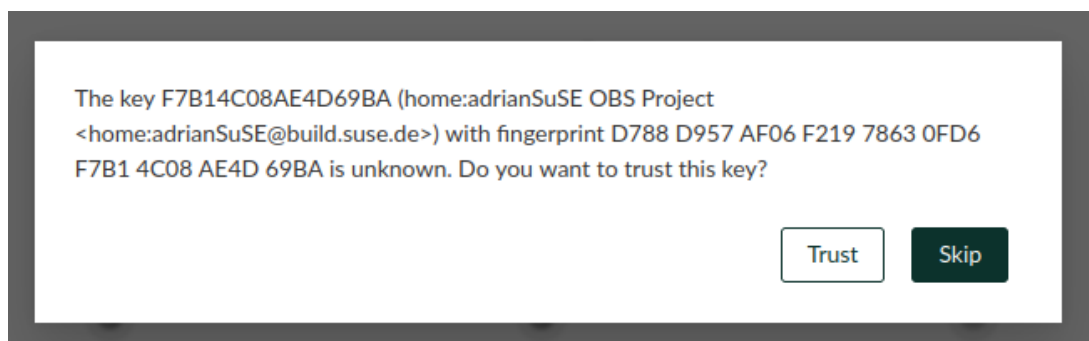
Klicken Sie auf das Pfeilmü in der oberen rechten Ecke und wählen Sie *Optionen des Installationsprogramms* aus, um die vom Installationsprogramm verwendete Sprache und das Tastaturlayout zu ändern. Die Sprache kann nur bei lokalen Installationen geändert werden. Wenn Sie einen Webbrowser für eine Ferninstallation verwenden, konfigurieren Sie die bevorzugte Inhaltssprache in den Browsereinstellungen und laden Sie das Installationsprogramm erneut.

8. Produktregistrierung: Geben Sie einen Registrierungscode und optional eine gültige E-Mail-Adresse ein.



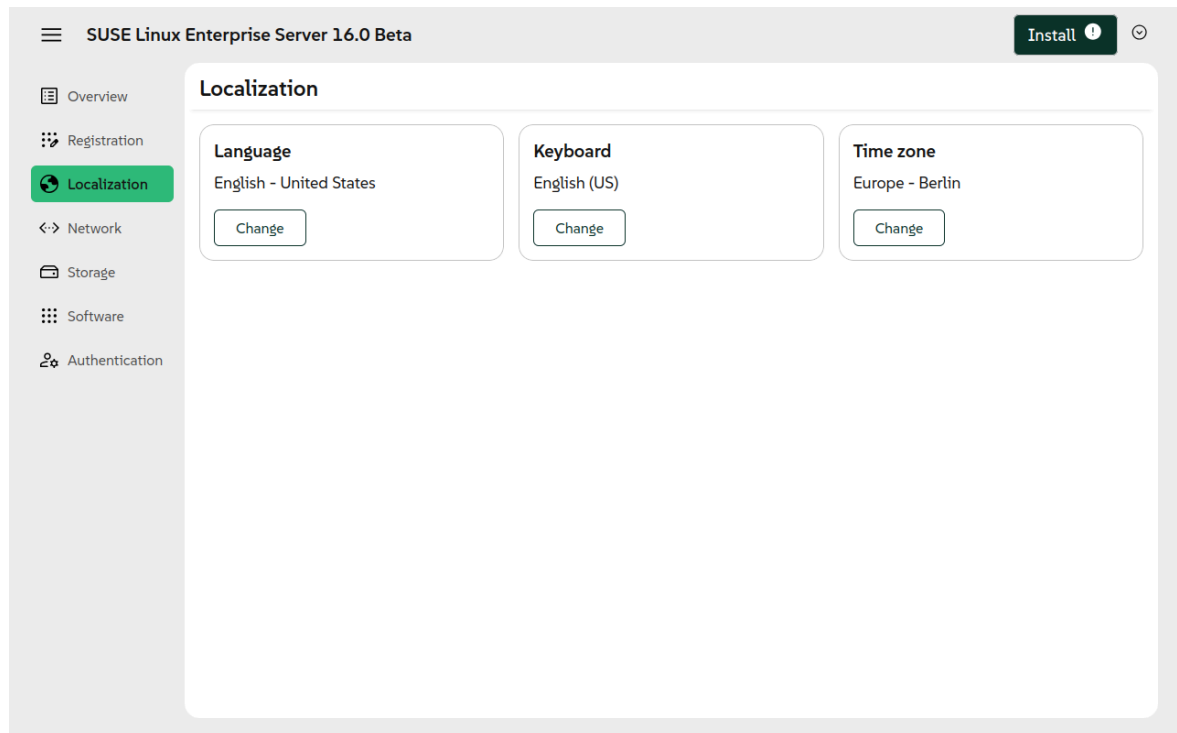
Anmerkung: Optionale Registrierung für Images, die mit dem Schlüssel des Entwicklers signiert wurden

Bei Images, die mit dem Schlüssel des Entwicklers signiert wurden, können Sie die Registrierung vor der Installation überspringen. Wenn das Image Ihres Produkts die Installation ohne Registrierung unterstützt, wird möglicherweise ein Pop-up ähnlich dem Folgenden angezeigt:

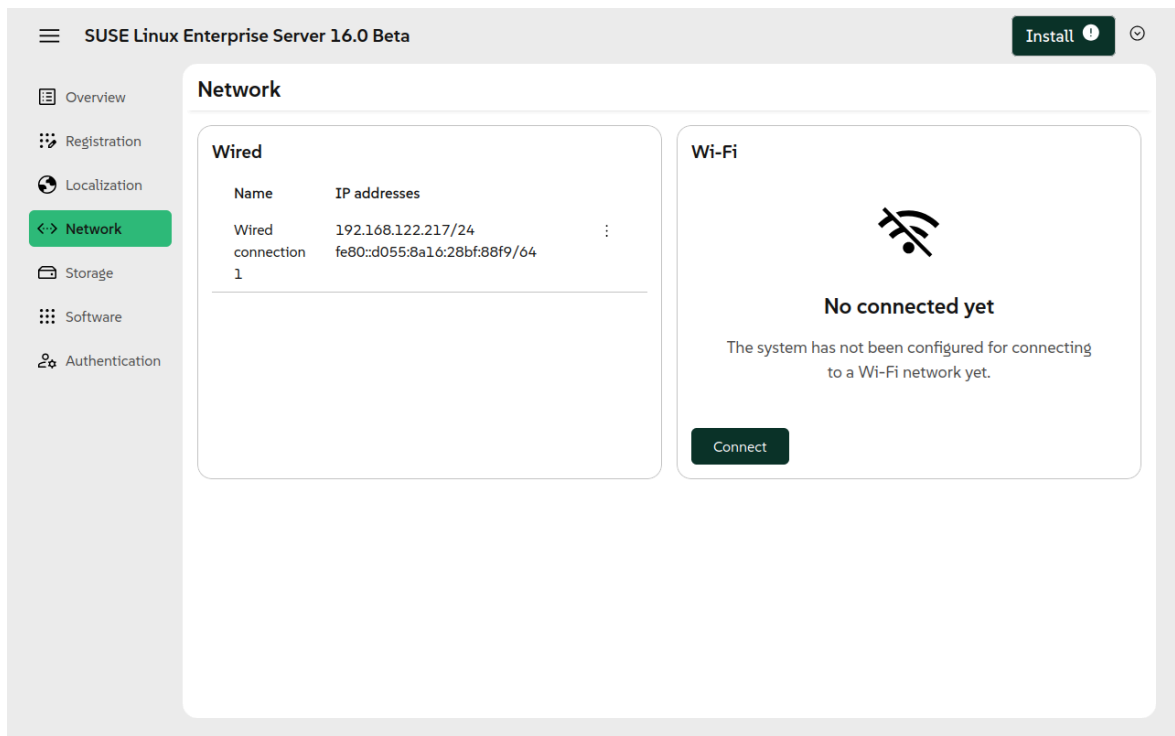


Um die Installation ohne Registrierung durchzuführen, wählen Sie im Pop-up *Trust* (Vertrauen) aus.

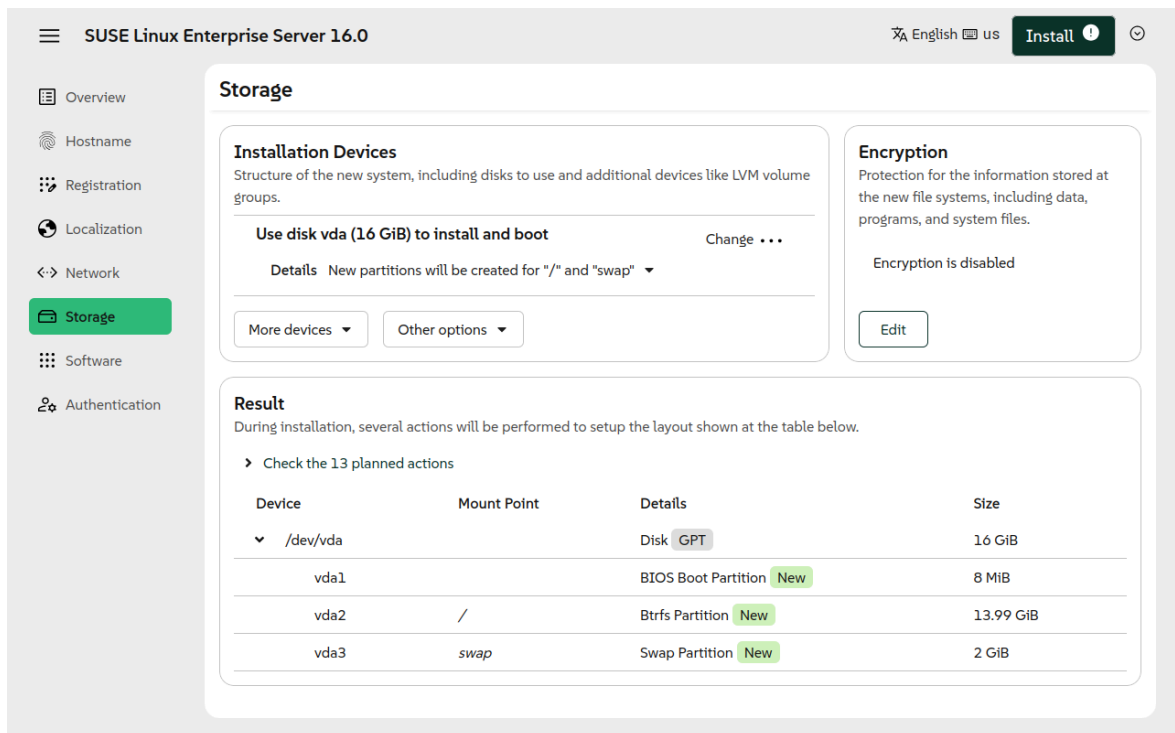
9. (Optional) Passen Sie Ihre Lokalisierungseinstellungen wie Sprache, Tastaturlayout und Zeitzone an.



10. (Optional) Konfigurieren Sie Ihre Netzwerkeinstellungen. Wenn Sie eine bestehende Netzwerkverbindung bearbeiten möchten, klicken Sie auf die drei Punkte.



11. Wählen Sie ein Speichergerät für die Installation aus.



Derzeit werden Installationen auf einzelnen Datenträgern oder LVM unterstützt. Um den Datenträger zu wechseln oder LVM zu verwenden, klicken Sie im Abschnitt *Installationsgeräte* auf die Schaltfläche *Weitere Optionen* für den Gerätenamen.

Um eine iSCSI-Festplatte zu erkennen, wählen Sie den iSCSI-Initiator aus und klicken Sie auf *iSCSI-Ziele ermitteln*.

Standardmäßig werden die Dateisysteme als neue Partitionen auf dem ausgewählten Gerät zugewiesen. Sie können dieses Verhalten in der Dropdownliste mit der Bezeichnung *Alle Inhalte werden gelöscht* in Abschnitt *Installationsgeräte* ändern. Die folgenden Speicherrichtlinien stehen zur Verfügung:

SPEICHERRICHTLINIEN

Aktuellen Inhalt löschen

Alle Partitionen werden entfernt und alle Daten auf den Datenträgern gehen verloren.

Vorhandene Partitionen verkleinern

Die Daten bleiben erhalten, aber die aktuellen Partitionen werden nach Bedarf verkleinert.

Verfügbaren Speicherplatz nutzen

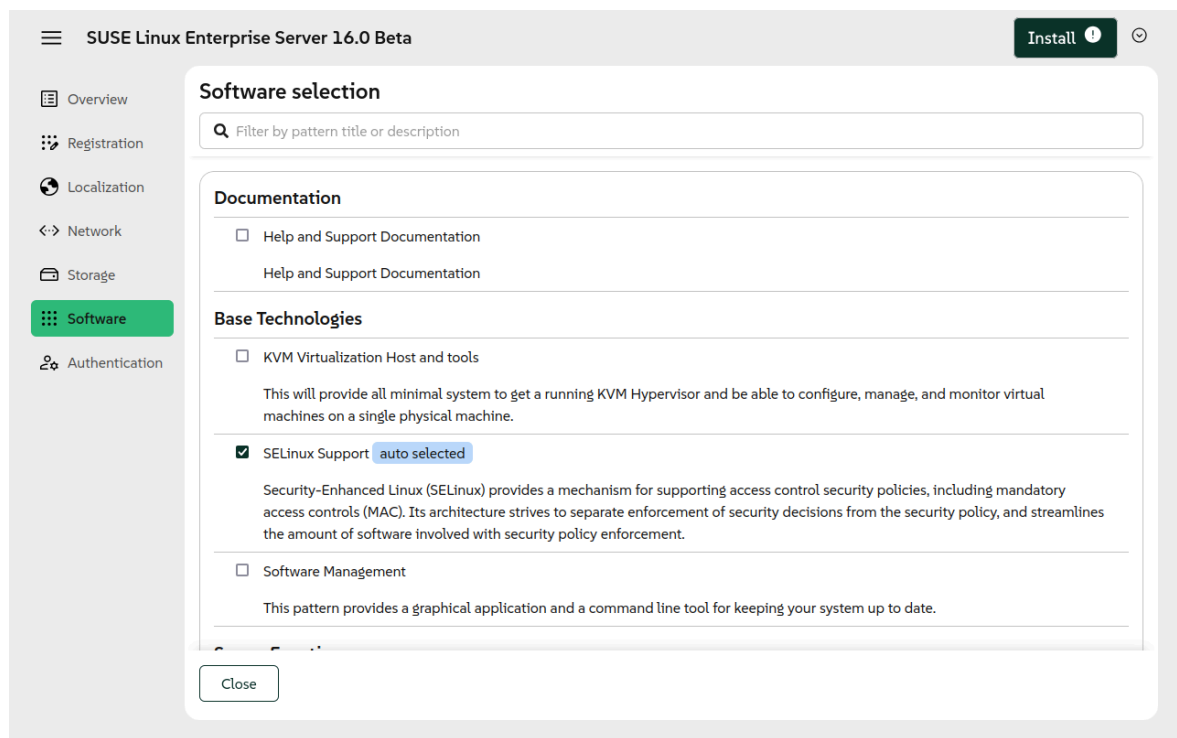
Die Daten bleiben erhalten. Es wird nur der Speicherplatz verwendet, der keiner Partition zugewiesen ist.

Benutzerdefiniert

Wählen Sie aus, was mit jeder Partition geschehen soll.

Um einzelne Partitionen zu bearbeiten, erweitern Sie den Abschnitt *Partitionen und Dateisysteme*, indem Sie auf > klicken. Optional können Sie Btrfs-Snapshots und Boot-Optionen konfigurieren und die vollständige Datenträgerverschlüsselung (FDE) aktivieren.

12. (Optional) Fügen Sie der Installation zusätzliche Software hinzu, z. B. den KVM-Hypervisor oder den Cockpit-Systemverwaltungsdienst.



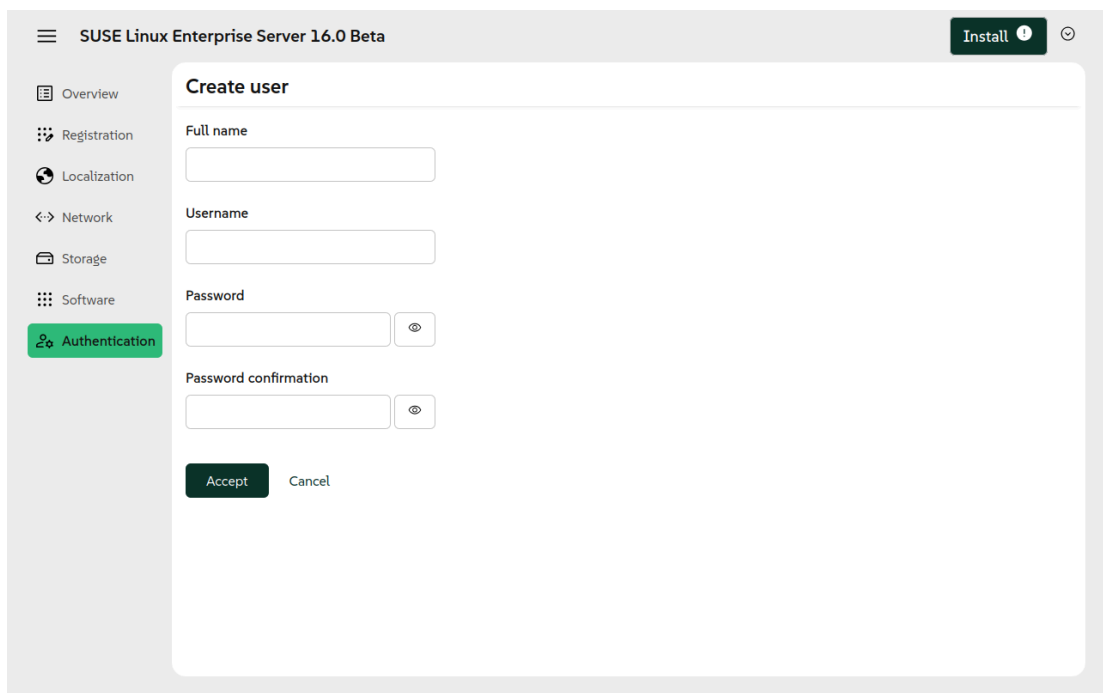
13. Konfigurieren Sie die Authentifizierungseinstellungen.



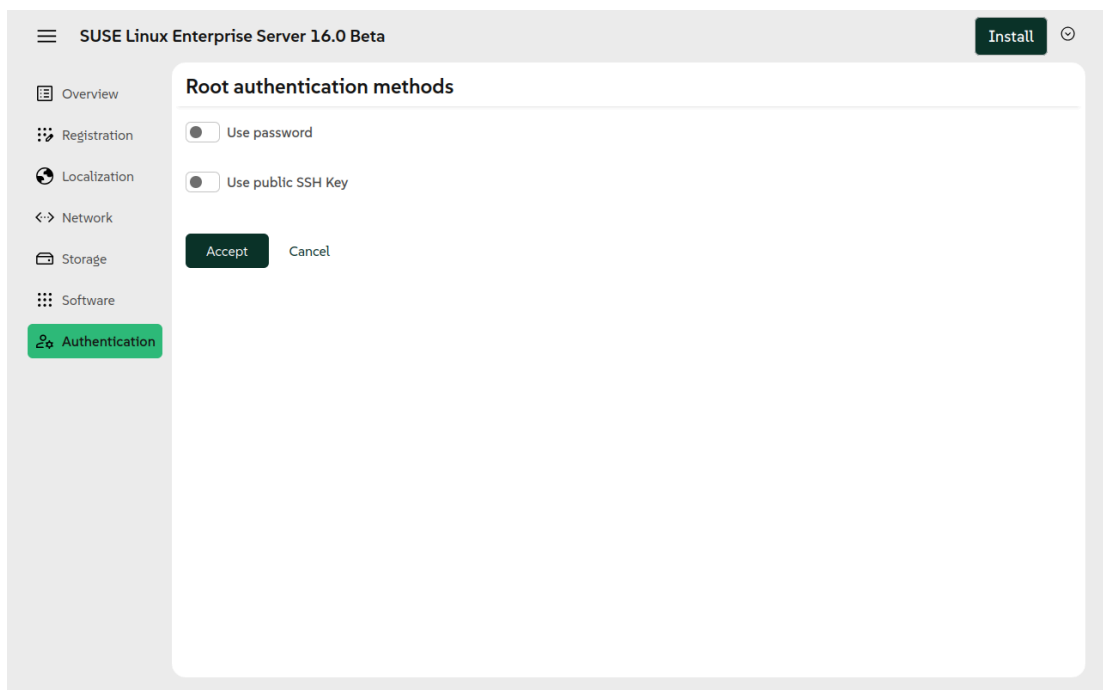
Wichtig: Kein SSH-Zugriff für root

Der SSH-Zugriff für root ist standardmäßig deaktiviert. Daher wird dringend empfohlen, einen Systembenutzer anzulegen. Der erste Systembenutzer erhält automatisch sudo-Rechte und kann auch für den Zugriff auf Cockpit verwendet werden.

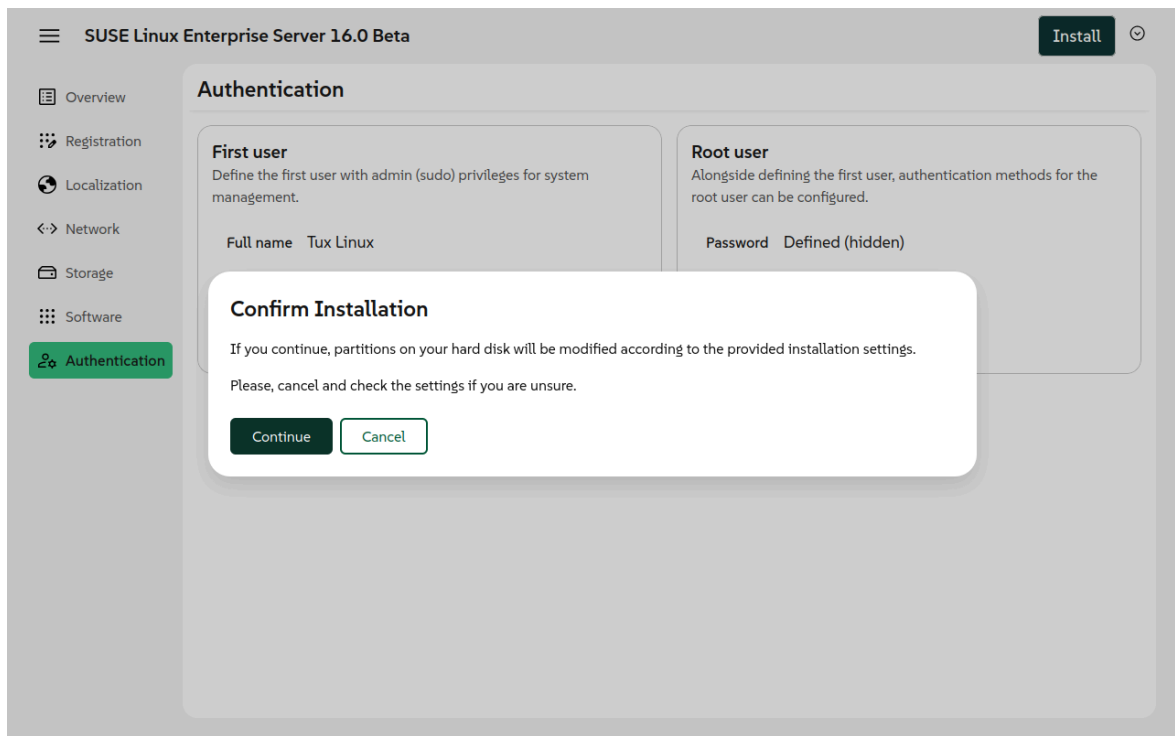
- a. Erstellen Sie einen Nicht-root-Benutzer. Klicken Sie auf *Jetzt einen Benutzer definieren* und geben Sie Details wie Benutzername und Passwort ein.



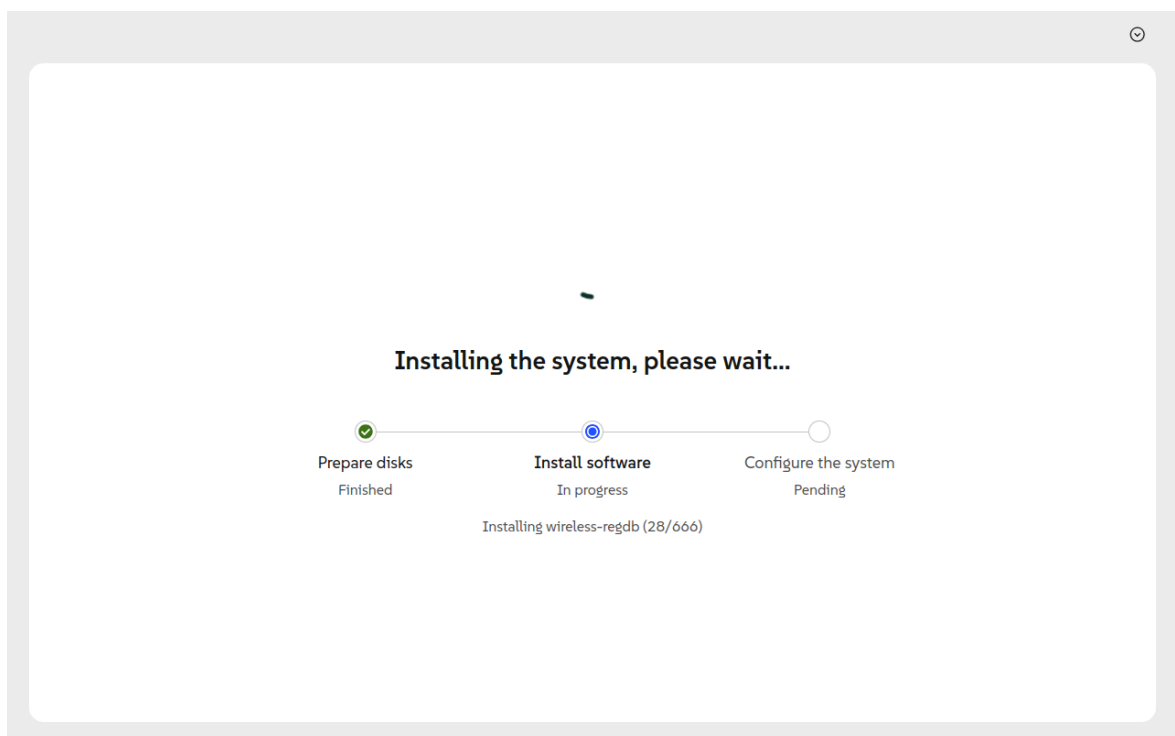
- b. Konfigurieren Sie die Authentifizierungsmethoden für root. Sie können ein sicheres Passwort, einen öffentlichen SSH-Schlüssel oder beides verwenden.



14. Klicken Sie auf *Installieren* und bestätigen Sie, um die Installation zu starten.



15. Warten Sie, bis die Systeminstallation abgeschlossen ist. Es dauert etwa 30 Minuten, bis die Installation abgeschlossen ist.

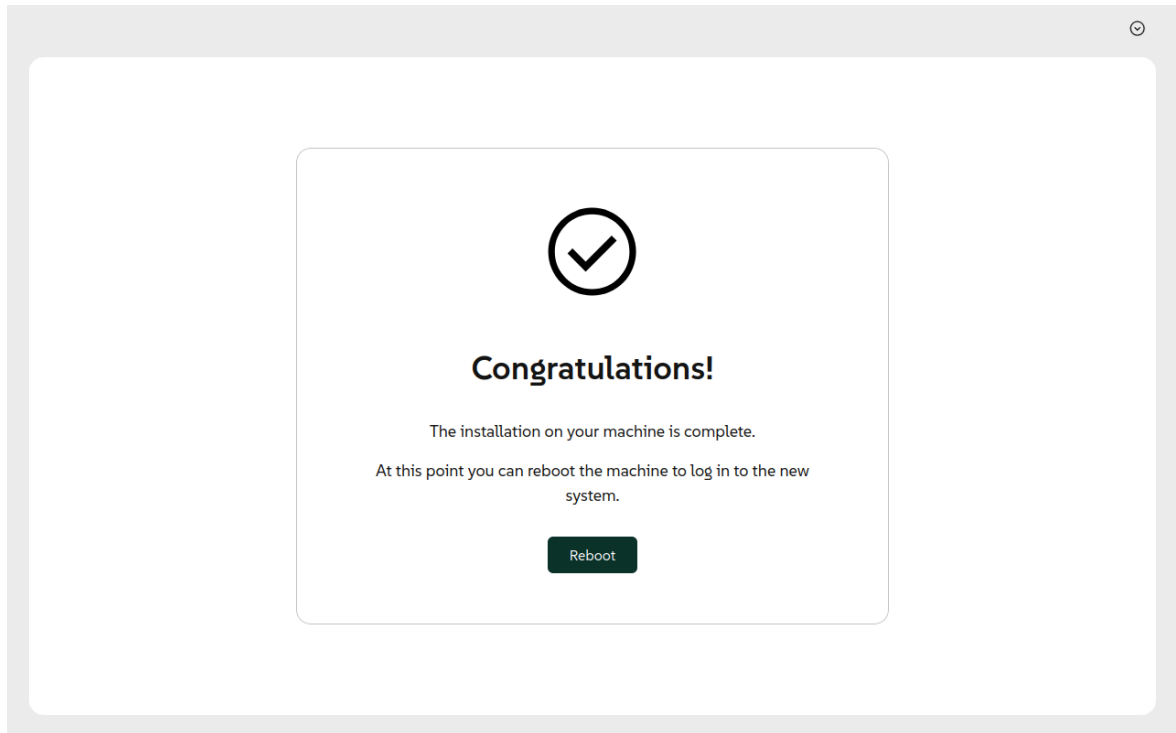




Tipp: Installationsprotokolle

Sie können das Pfeilmenü in der oberen rechten Ecke des Fensters verwenden, um die Protokolle und Systemmeldungen anzuzeigen.

16. Sobald die Installation abgeschlossen ist, wählen Sie *Neu starten*.



2.4 Zusammenfassung

Stellen Sie nach erfolgreichen Konfigurationsprüfungen, einer erfolgreichen Produktregistrierung sowie Installation und Neustart sicher, dass Sie sich anmelden und Ihr System verwenden können.

VORGEHEN 2: ÜBERPRÜFUNG DES SYSTEMS NACH DER INSTALLATION

1. Melden Sie sich beim System als root-Benutzer an.

```
Welcome to SUSE Linux Enterprise Server 16.0 Alpha3 (x86_64) - Kernel 6.4.0-sifo.1.8-default (tty1).

SSH host key: SHA256:bUpdqEfAYuoIgbMY0s70qIdMEHHC/eKikm7cL3kwCMA (RSA)
SSH host key: SHA256:L5PQdXeaN9edpLw0z29LWxCNKe26EWWWtNFopxMgn3U (ECDSA)
SSH host key: SHA256:CKA9BVCHu5jKhECTUSyBGQRyDQQMReyIfUIOR/nDsXY (ED25519)
enp1s0: 192.168.122.40 fe80::a486:c31a:e64:6c0c

Hint: Num Lock on

localhost login: root
Password: _
```

2. Führen Sie einige grundlegende Kommandos aus, um zu überprüfen, ob Ihr System wie erwartet funktioniert.

```
Welcome to SUSE Linux Enterprise Server 16.0 Alpha3 (x86_64) - Kernel 6.4.0-sifo.1.8-default (tty1).

SSH host key: SHA256:bUpdqEfAYuoIgbMY0s70qIdMEHHC/eKikm7cL3kwCMA (RSA)
SSH host key: SHA256:L5PQdXeaN9edpLw0z29LWxCNKe26EWWWtNFopxMgn3U (ECDSA)
SSH host key: SHA256:CKA9BVCHu5jKhECTUSyBGQRyDQQMReyIfUIOR/nDsXY (ED25519)
enp1s0: 192.168.122.40 fe80::a486:c31a:e64:6c0c

Hint: Num Lock on

localhost login: root
Password:
Have a lot of fun...
localhost:~ # whoami
root
localhost:~ # pwd
/root
localhost:~ #
```

3 Weitere Informationen

Informationen zu verwandten Themen finden Sie in den folgenden Ressourcen:

- Dokumentation des Agama Open Source-Projekts: <https://agama-project.github.io/docs>
- IBM Schnellstartanleitungen für die Installation von Linux auf POWER: <https://www.ibm.com/docs/en/linux-on-systems?topic=servers-quick-start-guides-installing-linux>.
- Anweisungen von IBM zur Installation von Linux auf PowerVM LPAR mithilfe einer virtuellen DVD (vDVD): <https://www.ibm.com/docs/en/linux-on-systems?topic=aim-installing-linux-powervm-lpar-by-using-virtual-dvd-vdvd>

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