Red Hat LEAPP Migration from 7 to 8

Marc Skinner

Principal Soloutions Architect

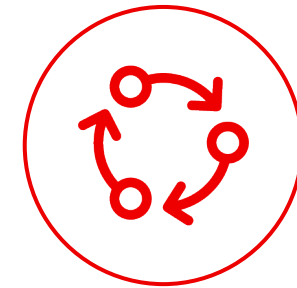# Top 3 reasons to move to Red Hat Enterprise Linux 8

Security and compliance

Maintain compliance and access the latest patches and fixes
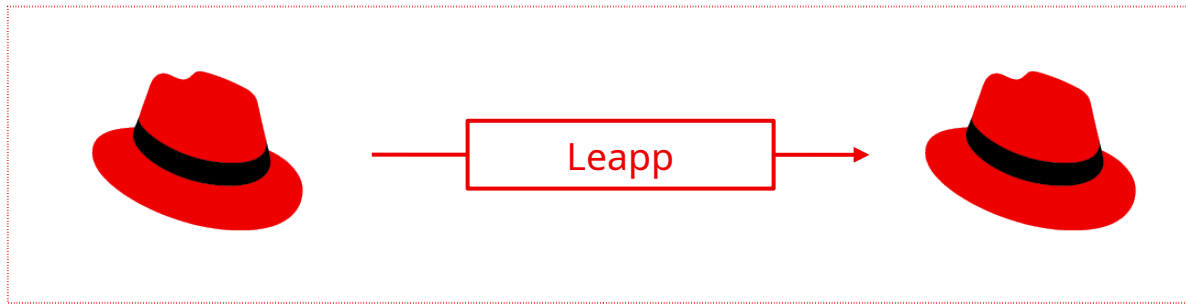
Access to innovation

Take advantage of all the latest Red Hat Enterprise Linux features and functionality
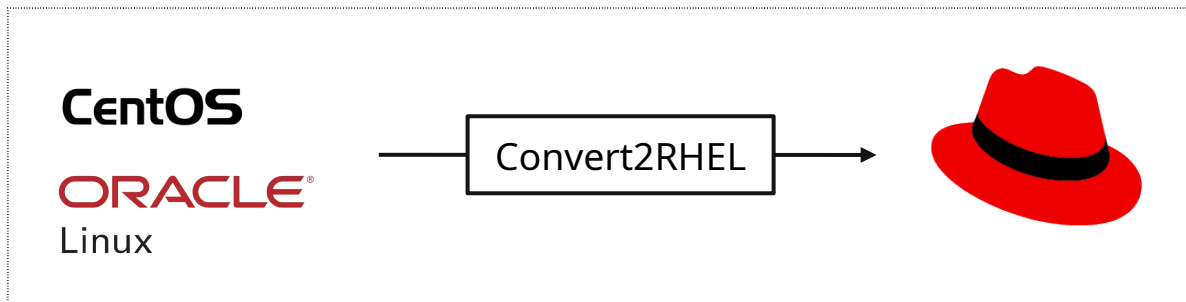
Lifecycle events

Avoid end of maintenance or extended support requirements

Red Hat

Types of migration

Migrate **across** Red Hat Enterprise Linux
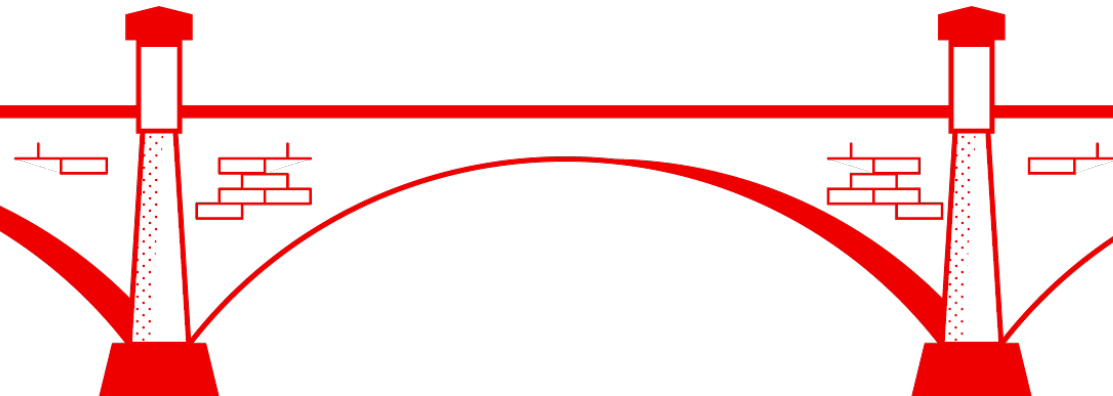
Upgrade from one major version to another.

Migrate **to** Red Hat Enterprise Linux

Convert from non-Red Hat Enterprise Linux systems.

Migrate across Red Hat Enterprise Linux

Upgrade from one major version of Red Hat Enterprise Linux to the next

In-place upgrades vs. re-deployment

In-place upgrade		Re-deployment
	VS	
Extend life of current hardware		Transition to new hardware
Potential time and cost savings		New, pristine deployment
Retains subscription		Transition to new Applications
Preserves configuration		Opportunity for new management/automation
Pre-Assessment guidance		Requires knowledge or assessment

5

d Hat

Use migration tools to streamline upgrades

Pre-upgrade-assistant

RedHat-upgrade-tool

Leapp

Red Hat
Enterprise Linux 6

Red Hat
Enterprise Linux 7

Red Hat
Enterprise Linux 8
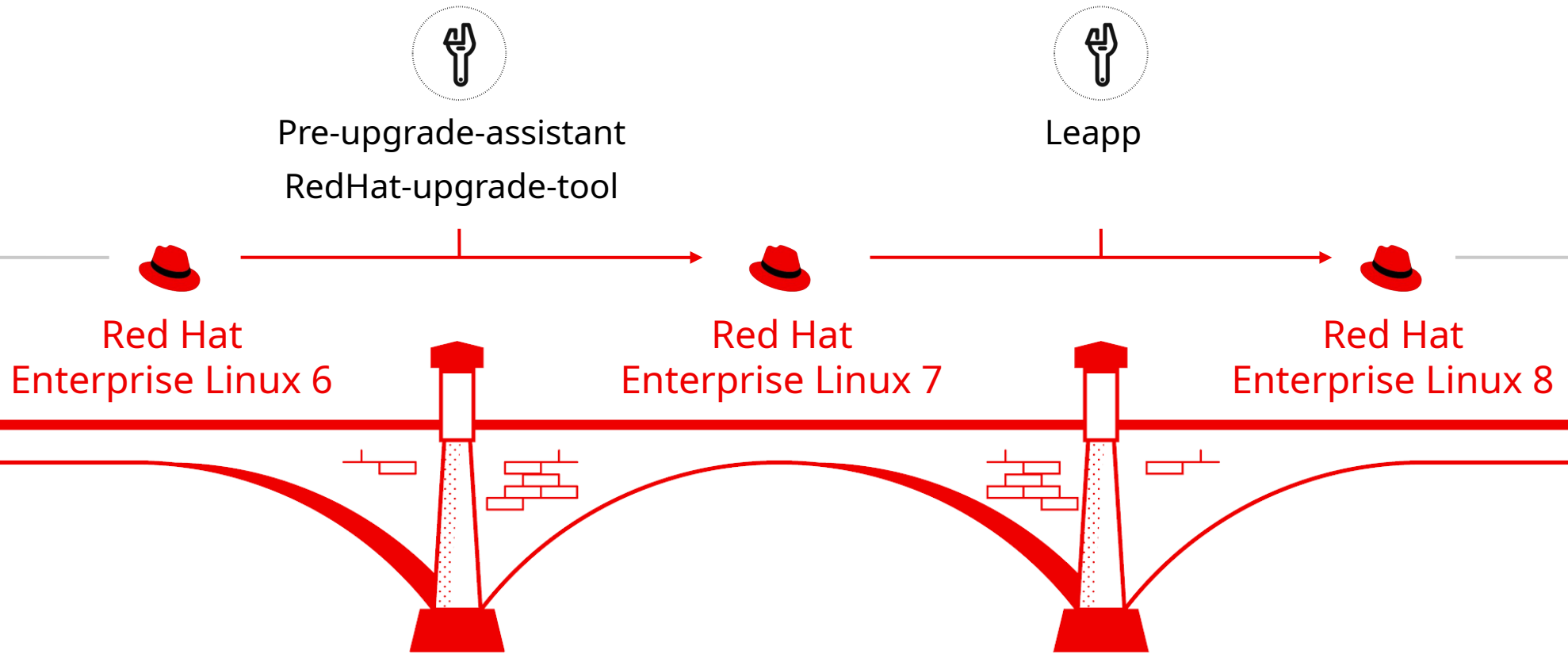
In-place upgrades support paths

Upgrade Red Hat Enterprise Linux faster and easier than ever before

Red Hat Enterprise Linux Tool	Origin Release		Target Release
pre-upgrade-assistant & redhat-upgrade-tool	6.10	→	7.9
leapp	7.9	→	8.4 / 8.6 *
leapp	8.7**	→	9.0 / 9.2 *

▶ Multiple upgrade path options

▶ Red Hat Enterprise Linux Latest → Latest EUS

▶ EUS = every even minor release

▶ Two phase process:

  · Upgradability analysis

  · Upgrade

▶ Original subscription stays attached to the system

▶ Large scale upgrades with Leapp + Satellite

Supported Targets will change as new versions are released
** Supported Origins will change as new versions are released

Features and benefits

Why Leapp for your upgrade from Red Hat Enterprise Linux 7 to 8?

No redeployment of the OS or apps

Automated path for ISV apps

Access to the latest Red Hat Enterprise Linux capabilities

Compatibility and remediation guidance

Simplified subscription management

Built-in fail safe and disaster recovery

All configuration is preserved

Supported by Red Hat

Shorter maintenance window

Red Hat

Scaling migrations with Leapp

**Red Hat
Insights**

- Insights rule
- Proactive suggestions

Red Hat Enterprise Linux > 8.2

**Red Hat
Satellite**

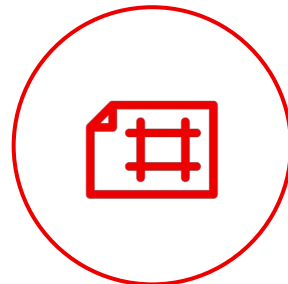- Satellite plug-in
- Pre-upgrade assessment report
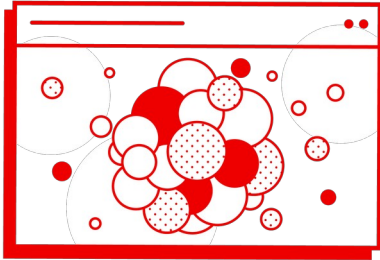- Remediations

Red Hat Satellite > 6.8

Preparation is key to upgrade success

Although the upgrade process takes approximately 15 minutes, there is some preparation required

Resources are available to help you prepare for the upgrade—expect this to take time

Large scale upgrade and modernization

————

Large global financial services firm upgrades from Red Hat Enterprise Linux 7 to Red Hat Enterprise Linux 8 easier than ever before.

Size

▶ Approximately 30,000 Red Hat Enterprise Linux 7 systems

Key driver

▶ Wanted the latest and greatest capabilities

Infrastructure details

▶ Over 300 applications (custom and 3rd party)

▶ Mix of bare metal and virtual

The process

▶ In-place upgrade from Red Hat Enterprise Linux 7.6 to 8.2 with Leapp
▶ 2 month PnT-led engagement
▶ Initial PoA took 1 week
▶ Write customer actors for custom applications— leveraging Red Hat samples
▶ Engineering code review
▶ Migration in process

Red Hat

Satellite Preparation

Migration Content Views
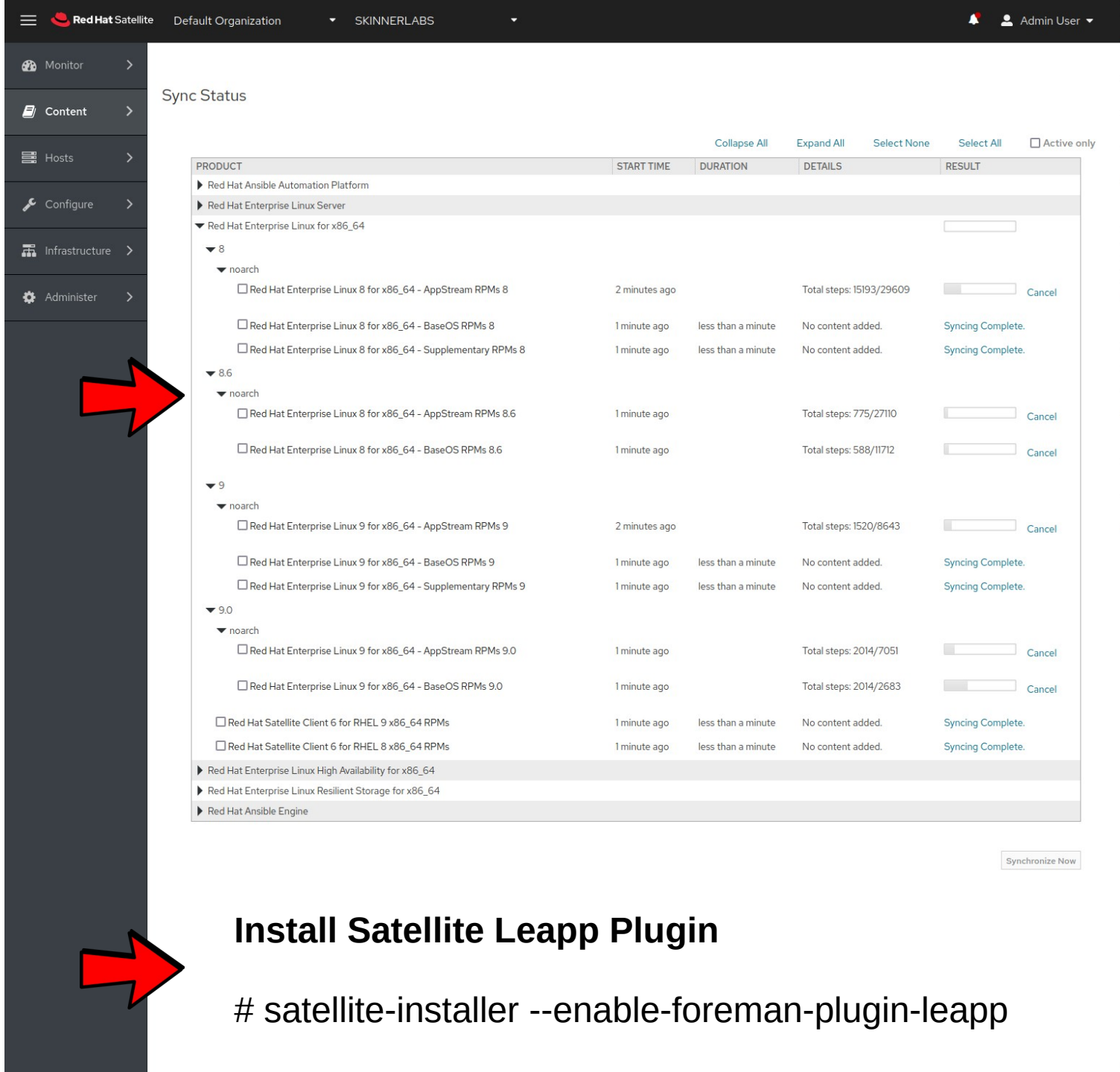RHEL7.9
RHEL8.6
RHEL9.0

Patch Content Views
RHEL8.7
RHEL9.1

Composite View
RHEL7-8 (RHEL7.9 and RHEL8.6)
RHEL8-9 (RHEL8.7 and RHEL 9.0)

Red Hat Satellite — Default Organization — SKINNERLABS — Admin User

Monitor
Content
Hosts
Configure
Infrastructure
Administer

Sync Status

Collapse All   Expand All   Select None   Select All   ☐ Active only

PRODUCT	START TIME	DURATION	DETAILS	RESULT
▶ Red Hat Ansible Automation Platform				
▶ Red Hat Enterprise Linux Server				
▼ Red Hat Enterprise Linux for x86_64				
▼ 8				
▼ noarch				
☐ Red Hat Enterprise Linux 8 for x86_64 – AppStream RPMs 8	2 minutes ago		Total steps: 15193/29609	Cancel
☐ Red Hat Enterprise Linux 8 for x86_64 – BaseOS RPMs 8	1 minute ago	less than a minute	No content added.	Syncing Complete.
☐ Red Hat Enterprise Linux 8 for x86_64 – Supplementary RPMs 8	1 minute ago	less than a minute	No content added.	Syncing Complete.
▼ 8.6				
▼ noarch				
☐ Red Hat Enterprise Linux 8 for x86_64 – AppStream RPMs 8.6	1 minute ago		Total steps: 775/27110	Cancel
☐ Red Hat Enterprise Linux 8 for x86_64 – BaseOS RPMs 8.6	1 minute ago		Total steps: 588/11712	Cancel
▼ 9				
▼ noarch				
☐ Red Hat Enterprise Linux 9 for x86_64 – AppStream RPMs 9	2 minutes ago		Total steps: 1520/8643	Cancel
☐ Red Hat Enterprise Linux 9 for x86_64 – BaseOS RPMs 9	1 minute ago	less than a minute	No content added.	Syncing Complete.
☐ Red Hat Enterprise Linux 9 for x86_64 – Supplementary RPMs 9	1 minute ago	less than a minute	No content added.	Syncing Complete.
▼ 9.0				
▼ noarch				
☐ Red Hat Enterprise Linux 9 for x86_64 – AppStream RPMs 9.0	1 minute ago		Total steps: 2014/7051	Cancel
☐ Red Hat Enterprise Linux 9 for x86_64 – BaseOS RPMs 9.0	1 minute ago		Total steps: 2014/2683	Cancel
☐ Red Hat Satellite Client 6 for RHEL 9 x86_64 RPMs	1 minute ago	less than a minute	No content added.	Syncing Complete.
☐ Red Hat Satellite Client 6 for RHEL 8 x86_64 RPMs	1 minute ago	less than a minute	No content added.	Syncing Complete.
▶ Red Hat Enterprise Linux High Availability for x86_64				
▶ Red Hat Enterprise Linux Resilient Storage for x86_64				
▶ Red Hat Ansible Engine				

Synchronize Now

Install Satellite Leapp Plugin

satellite-installer --enable-foreman-plugin-leapp

Hosts

Search 🔍 🔖▼

Select Action ▼ Export Register Host Create Host

1 of 19 selected

☐	Power	Name	Recommen...	Operating system	Model	Owner	Host group	Last report	Puppet Environment	Comment	Actions
☐	⏻	⊗ db1.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ db2.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ db3.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ haproxy1.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ haproxy2.rhlab.skinnerlabs.co...		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql13-1.rhlab.skinnerlabs.co...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql13-2.rhlab.skinnerlabs.c...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql13-3.rhlab.skinnerlabs.c...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql1.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql2.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql3.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	ⓘ rhel7-leapp1.rhlab.skinnerlab...		🔴 RHEL Server 7.9	KVM	👤 Ano...					Edit ▾
☐	⏻	⊘ rhel7-leapp2.rhlab.skinnerlab...		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ rhel8-latest.rhlab.skinnerlabs...		🔴 RHEL 8.6	Standard ...	👤 Ano...					Edit ▾
☐	⏻	ⓘ rhel8-leapp1.rhlab.skinnerlab...		🔴 RHEL 8.7	KVM	👤 Ano...					Edit ▾
☐	⏻	ⓘ rhel8-leapp2.rhlab.skinnerlab...		🔴 RHEL 8.7	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ rhel9-imagebuilder.rhlab.skin...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ rhel9-latest.rhlab.skinnerlabs...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ sat6.i.skinnerlabs.com		🔴 RHEL 8.7	KVM			8 minute...	production		Edit ▾

1 - 19 of 19 items ▼   ≪ ‹ 1 of 1 › ≫

Red Hat Satellite

🔔   👤 Admin User ▼

Monitor ›
Content ›
Hosts ›
Configure ›
Infrastructure ›
Administer ›

Hosts › rhel7-leapp1.rhlab.skinnerlabs.com ⇄

rhel7-leapp1.rhlab.skinnerlabs.com ❗ `RHEL Server 7.9` `x86_64`

Schedule a job ▼   Edit   ⋮

Created 4 hours ago by Anonymous Admin (updated 14 minutes ago)

Overview   Content   Traces   Ansible   Puppet   Reports   Insights

Details   ⏻ ▼

IPv6 address
Not available

IPv4 address
192.168.40.76 📋

MAC address
52:54:00:c9:fa:77 📋

Host group
Not available

Host owner
👤 Anonymous Admin

Comment
Not available

Host status ❗

✅ 4   ⚠️ 0   ❗ 1   🚫
10

Manage all statuses

Installable errata

✅

All errata up-to-date

No action required

Recent audits   All audits

update   14 minute…   foreman_
update   14 minute…   f
update   4 hours a…   foreman_

System purpose ❓   Edit

Role
SLA
Usage type
Release version

Content view details   ⋮

📄 Content view

RHEL7 LAB

Version in use

Version 29.0 (latest)

Total risks   ⋮

No results found

Host collections

➕
No host collections yet
To get started, add this host to a host collection.

Add to a host collection

Recent jobs   ⋮

Finished   Running   Scheduled

Upgradeability check for …   1 minute ago   ❗ failed
Upgradeability check for …   1 hour ago   ❗ failed

RHEL 7 Migration Known Issues

1. Networking teaming without Network Manager will not upgrade

2. If winbind or wins Samba modules are used in /etc/nsswitch.conf upgrade will not work, those options will need to be commented out during upgrade

3. pam_krb5 and pam_pkcs11 are deprecated – make sure they are not required or requisite in PAM configuration before upgrade

4. DES and 3DES are deprecated – make sure you have alternative encryption types enabled

5. Software Raid systems (mdadm) are not currently supported

6. 3rd party packages or drivers can cause issues

RHEL 7 Migration Preparation

1. Disable anti-virus

2. Disable any automation that might interfere with upgrade

3. Ensure only 1 NIC (eth) device is active

4. Ensure you have a backup or snapshot

5. Are you using 3rd party packages or drivers

6: Make sure /var has free space

7. Run leapp preupgrade

Red Hat

RHEL 7 Migration

Must have "leapp" packages install from "rhel-7-extras-rpms"

subscription-manager release --unset

yum -y install leapp

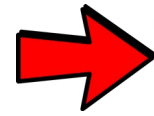Manually download:

leapp-data-21-tar.gz from following article:

https://access.redhat.com/articles/3664871

tar -xzf leapp-data-21.tar.gz -C /etc/leapp/files

⚙ Monitor ❯
📄 Content ❯
☰ Hosts ❯
🔧 Configure ❯
🏠 Infrastructure ❯
⚙ Administer ❯

Hosts ❯ rhel7-leapp1.rhlab.skinnerlabs.com ⇄

rhel7-leapp1.rhlab.skinnerlabs.com ⚠ `RHEL Server 7.9` `x86_64`

Schedule a job ▼   Edit   ⋮

Created 22 hours ago by Anonymous Admin (updated 21 hours ago)

Overview   Content   Traces   Ansible   Puppet   Reports   Insights

Details ⏻ ▼

IPv6 address
Not available

IPv4 address
192.168.40.76 📋

MAC address
52:54:00:c9:fa:77 📋

Host group
Not available

Host owner
👤 Anonymous Admin

Comment
Not available

Host status ⚠

✅ 4 ⚠ 1 ❗ 0 🚫

10

Manage all statuses

Installable errata

✅

All errata up-to-date

No action required

Recent audits   All audits

update   22 hours ...   foreman,
update   22 hours ...   a
update   22 hours ...   foreman,

System purpose ⓘ   Edit

Role
SLA
Usage type
Release version

Content view details   ⋮

📦 Content view

RHEL7-8 `LAB`

Version in use

Version 2.0 (latest)

Total risks   ⋮

No results found

Host collections

➕

No host collections yet
To get started, add this host to a host collection.

Add to a host collection

Recent jobs   ⋮

Finished   Running   Scheduled

No results found

Default Organization   SKINNERLABS

Monitor

Content

Hosts

Configure

Infrastructure

Administer

Jobs > Job invocation

| Job category * | Commands |

| Job template * |

| Bookmark |

Convert 2 RHEL

Katello

Katello via Ansible

Leapp - Preupgrade

Resolves to

Leapp - Upgrade

command ⓘ *

Maintenance Operations

Modules

> Display advanced fields

| Type of query ⓘ | ● Static Query ○ Dynamic Query |

| Schedule | ● Execute now ○ Schedule future execution ○ Set up recurring execution |

Submit   Cancel

Default Organization ▾   SKINNERLABS ▾

Monitor >
Content >
Hosts >
Configure >
Infrastructure >
Administer >

Jobs > Job invocation

Job category *	Leapp - Preupgrade ▾
Job template *	Run preupgrade via Leapp ▾
Bookmark	▾
Search Query	name ^ (rhel7-leapp1.rhlab.skinnerlabs.com) ✕
Resolves to	1 hosts ⟳ 👁
	› Display advanced fields
Type of query ⓘ	● Static Query ○ Dynamic Query
Schedule	● Execute now ○ Schedule future execution ○ Set up recurring execution
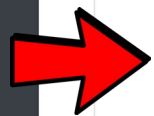
Submit Cancel

Monitor

Content

Hosts

Configure

Infrastructure

Administer

Jobs > Upgradeability check for RHEL 7 host ⇄

Overview   Previ...   **Leapp preupgrade report**

Results

100%
Failed

✅ 0 | ❌ 1 | ⚙ 0 | ✖ 0

Search

Host
rhel7-leapp1.rhlab.skinnerlabs.com

Monitor >

Content >

Hosts >

Configure >

Infrastructure >

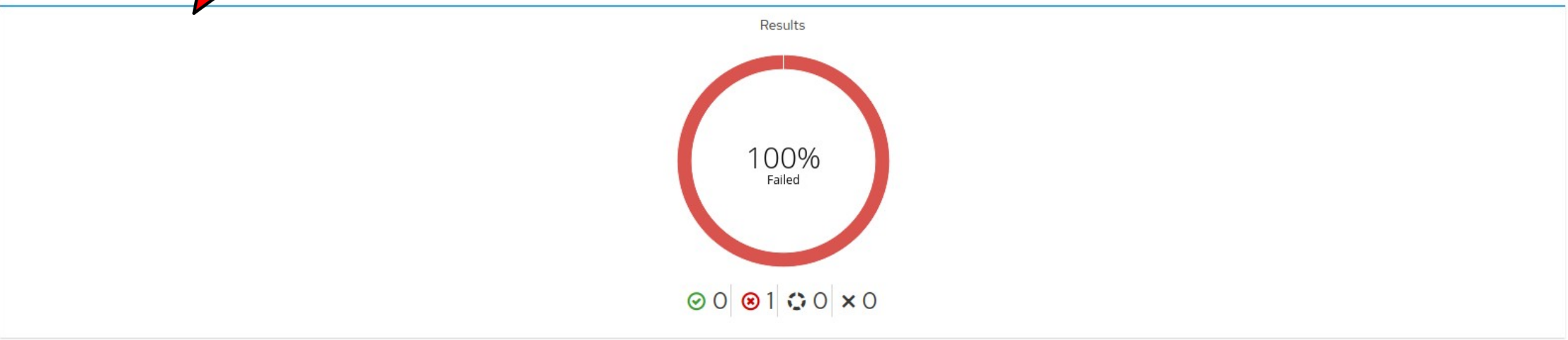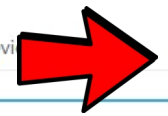Administer >

Jobs > Upgradeability check for RHEL 7 host ⇄

Create Report | Rerun | Rerun failed | Job Task | Cancel Job | Abort Job

Overview   Preview templates   Leapp preupgrade report

Title ▾ [   ]   Fix Selected | Run Upgrade

☐	Title	Host	Risk Factor	Has Remediation?	Inhibitor?
› ☐	Excluded target system repositories	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰	⚠ Has Remediation	
› ☐	Packages available in excluded repositories will not be installed	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰		
› ☐	chrony using default configuration	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰		
› ☐	Grep has incompatible changes in the next major version	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰	⚠ Has Remediation	
› ☐	Dosfstools incompatible changes in the next major version	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰	⚠ Has Remediation	
› ☐	Difference in Python versions and support in RHEL 8	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰	⚠ Has Remediation	
› ☐	SElinux relabeling will be scheduled	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰		
› ☐	SElinux will be set to permissive mode	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰	⚠ Has Remediation	
› ☐	Postfix has incompatible changes in the next major version	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰		
⌄ ☐	Leapp detected loaded kernel drivers which have been removed in RHEL 8. Upgrade cannot proceed.	🖳 rhel7-leapp1.rhlab.skinnerlabs.com	☰		🛡 Inhibitor

Title	Leapp detected loaded kernel drivers which have been removed in RHEL 8. Upgrade cannot proceed.	✕
Risk Factor	☰ high	
Summary	Support for the following RHEL 7 device drivers has been removed in RHEL 8:	
	- floppy	
	- pata_acpi	
Tags	kernel drivers	

| › ☐ | Current RAM and ... conf configuration will be kept | 🖳 rhel7- |

RHEL 7 Migration Cockpit Leapp Plugin

```
# yum -y install cockpit-leapp
# systemctl start cockpit.socket
# systemctl enable cockpit.socket
# firewall-cmd --add-service=cockpit --permanent
# firewall-cmd --reload
```

https://rhel7-leapp1.rhlab.skinnerlabs.com:9090

📄 rhel7-leapp1.rhl...

System

Logs

Networking

Accounts

Services

Diagnostic Reports

Kernel Dump

SELinux

Subscriptions

Terminal

Upgrade Report

Upgrade Report for: rhel7-leapp1.rhlab.skinnerlabs.com

Filters ▼

Title	Risk Factor ⌄	Description	Tags
Packages available in excluded repositories will not be installed	High		repository
Difference in Python versions and support in RHEL 8	High	💡 Remediation hint ⬀ Links	python
Leapp detected loaded kernel drivers which have been removed in RHEL 8. Upgrade cannot proceed.	High	⊗ Inhibitor	kernel drivers
GRUB core will be updated during upgrade	High		boot
Missing required answers in the answer file	High	⊗ Inhibitor 💡 Remediation hint ▶ Remediation command	
chrony using default configuration	Medium		services time m
Postfix has incompatible changes in the next major version	Low		services email
Grep has incompatible changes in the next major version	Low	💡 Remediation hint	tools
Dosfstools incompatible changes in the next major version	Low	💡 Remediation hint	filesystem tools
SELinux will be set to permissive mode	Low	💡 Remediation hint	selinux security
Excluded target system repositories		💡 Remediation hint	repository
SELinux relabeling will be scheduled			selinux security
Current PAM and nsswitch.conf configuration will be kept.			authentication s

30 ⌃ per page
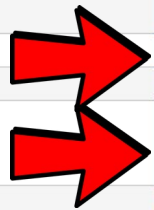
Detail ✕

Title

Missing required answers in the answer file

Time

13.02.2023 14:58:11

Risk factor ❶

🔴 High

Summary

One or more sections in answerfile are missing user choices:

remove_pam_pkcs11_module_check.confirm For more information consult

https://leapp.readthedocs.io/en/latest/dialogs.html

Remediations ❶

Please register user choices with leapp answer cli command or by manually editing the answerfile.

Run Remediation   Add to Remediation Plan

`answer --section remove_pam_pkcs11_module_check.confirm=True`

Related resources ❶

Dialog

(dialog) = remove_pam_pkcs11_module_check.confirm

RHEL 7 Migration Inhibitor #1

Leapp detected loaded kernel drivers which have been removed in RHEL 8. Upgrade cannot proceed.

Support for the following RHEL 7 device drivers has been removed in RHEL 8:
- floppy
- pata_acpi

Solution:

rmmod floppy
rmmod pata_acpi

RHEL 7 Migration Inhibitor #2

Missing required answers in the answer file

One or more sections in answerfile are missing user choices:
remove_pam_pkcs11_module_check.confirm

Command: leapp answer --section remove_pam_pkcs11_module_check.confirm=True

Solution:

DON'T cp /var/log/leapp/answerfile /etc/leapp/answers

edit /var/log/leapp/answerfile and uncomment/edit following line:

confirm = True

Updated file needs to be present /var/log/leapp/answerfile

Red Hat

Default Organization   SKINNERLABS

Admin User

Jobs > Upgradeability check for RHEL 7 host

Rerun | Rerun failed | Job Task | Cancel Job | Abort Job

Overview   Pre...   Leapp preupgrade report

Results

100%
Success

⊘ 1 ⊗ 0 ◌ 0 ✕ 0

Target hosts

Manual selection using **static query**

```
name ^ (rhel7-leapp1.rhlab.skinnerlabs.com)
```
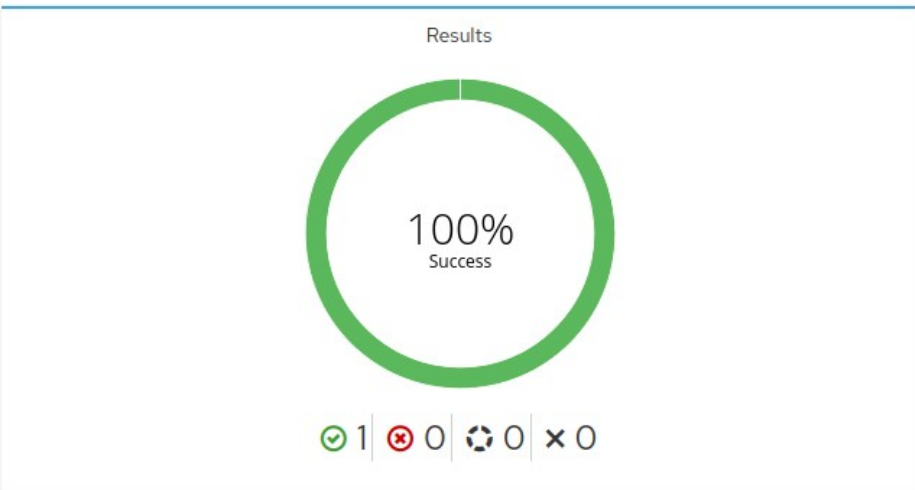
Execution order: **alphabetical**

Organization: **Default Organization**

Location: **SKINNERLABS**

Evaluated at: 2023-02-13 14:24:35 -0600

root
Run preupgrade via Leapp effective user

1
Total hosts

Search

Host	Status	Actions
rhel7-leapp1.rhlab.skinnerlabs.com	⊘ success	Host detail

1 – 1 of 1 items   « ‹   1   of 1   › »

Monitor >

Content >

Hosts >

Configure >

Infrastructure >

Administer >

Jobs > Upgradeability check for RHEL 7 host ⇄

Create Report | Rerun | Rerun failed | Job Task | Cancel Job | Abort Job

Overview   Preview templates   Leapp preupgrade report

| Title ▾ | | Run Upgrade |

	Title	Host	Risk Factor	Has Remediation?	Inhibitor?
> ☐	Data file /etc/leapp/files/repomap.json is invalid or could not be retrieved.	🖥 rhel7-leapp2.rhlab.skinnerlabs.com	☰		
> ☐	Data file /etc/leapp/files/device_driver_deprecation_data.json is invalid or could not be retrieved.	🖥 rhel7-leapp2.rhlab.skinnerlabs.com	☰		
> ☐	Actor didn't receive required messages: RepositoriesMapping	🖥 rhel7-leapp2.rhlab.skinnerlabs.com	☰		
> ☐	Data file /etc/leapp/files/pes-events.json is invalid or could not be retrieved.	🖥 rhel7-leapp2.rhlab.skinnerlabs.com	☰		

1 - 4 of 4 items ▾   « <   1   of 1   > »

Job category * | Leapp - Upgrade

Job template * | Run upgrade via Leapp

Bookmark

Search Query | name ^ (rhel7-leapp2.rhlab.skinnerlabs.com)   ✖
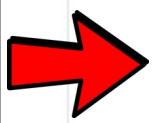
Resolves to   1 hosts ⟳ 👁

Reboot ⓘ * | true

> Display advanced fields

Type of query ⓘ   ⦿ Static Query   ◯ Dynamic Query

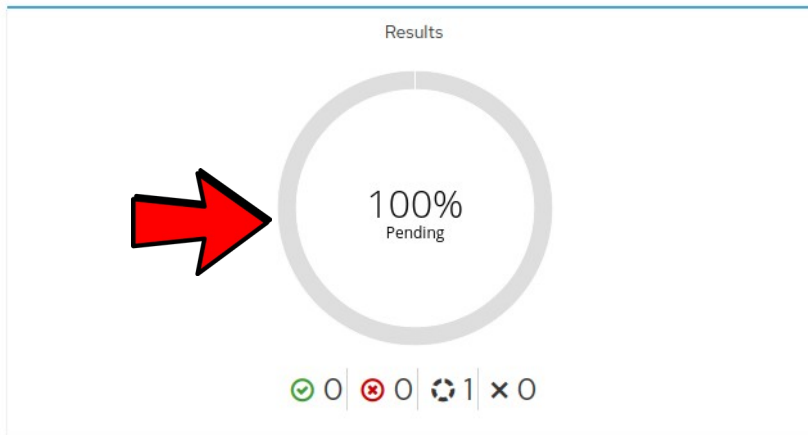Schedule   ⦿ Execute now   ◯ Schedule future execution   ◯ Set up recurring execution

Submit   Cancel

Monitor ❯

Content ❯

Hosts ❯

Configure ❯

Infrastructure ❯

Administer ❯

Jobs ❯ Upgrade RHEL 7 host ⇄

Create Report | Rerun | Rerun failed | Job Task | Cancel Job | Abort Job

Overview | Preview templates

Results

100%
Pending

✅ 0 | ⊗ 0 | ◌ 1 | ✕ 0

Target hosts

Manual selection using static query

```
name ^ (rhel7-leapp2.skinnerlabs.com)
```

Execution order: **alphabetical**

Organization: **Default Organization**

Location: **SKINNERLABS**

Evaluated at: 2023-02-14 10:50:11 -0600

👤 **root**
Run upgrade via Leapp effective user

🖳 **1**
Total hosts

User Inputs

Reboot: true

🔍 Search   🔍   🔖 ▾

Host	Status	Actions
rhel7-leapp2.rhlab.skinnerlabs.com	◌ running	Host detail ▾

1 - 1 of 1 items ▾   ‹‹ ‹   1   of 1   › ››

RHEL 7 Migration Logs

Debug output written to /var/log/leapp/leapp-upgrade.log

A report has been generated at /var/log/leapp/leapp-report.txt

Answerfile has been generated at /var/log/leapp/answerfile

Red Hat

RHEL 7 Migration Process

Auto Reboot – will reboot into RHEL-UPGRADE first boot process, which will install all new packages, kernel etc.

Auto Reboot – SELINUX relabel process
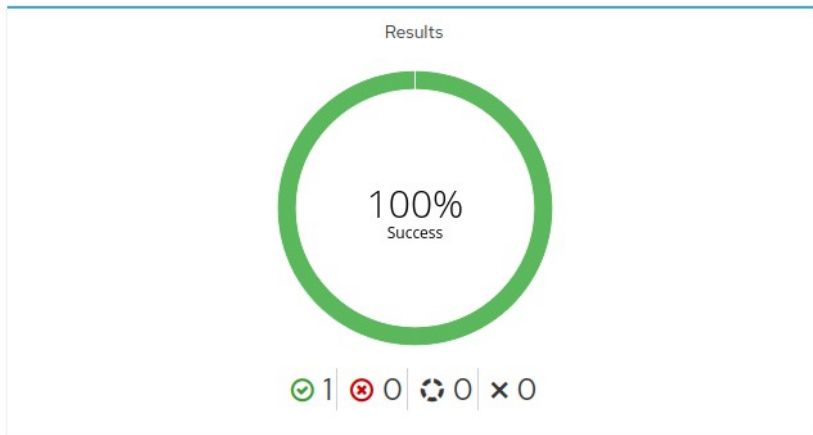
Final Reboot – Satellite FirstBoot

Red Hat

Jobs > Upgrade RHEL 7 host ⇄

Create Report | Rerun | Rerun failed | Job Task | Cancel Job | Abort Job

Overview   Preview templates

Results

100%
Success

✅ 1 ⊗ 0 ◈ 0 ✕ 0

Target hosts

Manual selection using **static query**

```
name ^ (rhel7-leapp2.rhlab.skinnerlabs.com)
```

Execution order: **alphabetical**

Organization: **Default Organization**

Location: **SKINNERLABS**

Evaluated at: 2023-02-14 10:50:11 -0600

root
Run upgrade via Leapp effective user

1
Total hosts

User Inputs

Reboot: true

🔍 Search

Host	Status	Actions
rhel7-leapp2.rhlab.skinnerlabs.com	✅ success	Host detail ▾

1 – 1 of 1 items ▾ |« ‹ 1 of 1 › »|

Hosts

Search 🔍 🔖▾

Select Action ▾ Export Register Host **Create Host**

0 of 19 selected

	Power	Name	Recommen...	Operating system	Model	Owner	Host group	Last report	Puppet Environment	Comment	Actions
☐	⏻	⊗ db1.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ db2.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ db3.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ haproxy1.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ haproxy2.rhlab.skinnerlabs.co...		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql13-1.rhlab.skinnerlabs.co...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql13-2.rhlab.skinnerlabs.c...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql13-3.rhlab.skinnerlabs.c...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql1.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql2.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ pgsql3.rhlab.skinnerlabs.com		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ rhel7-leapp1.rhlab.skinnerlab...		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	ⓘ rhel7-leapp2.rhlab.skinnerlab...		🔴 RHEL 8.6	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ rhel8-latest.rhlab.skinnerlabs...		🔴 RHEL 8.6	Standard ...	👤 Ano...					Edit ▾
☐	⏻	⊘ rhel8-leapp1.rhlab.skinnerlab...		🔴 RHEL 8.7	KVM	👤 Ano...					Edit ▾
☐	⏻	⊘ rhel8-leapp2.rhlab.skinnerlab...		🔴 RHEL 8.7	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ rhel9-imagebuilder.rhlab.skin...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊗ rhel9-latest.rhlab.skinnerlabs...		🔴 RedHat 9.0	KVM	👤 Ano...					Edit ▾
☐	⏻	⊘ sat6.i.skinnerlabs.com		🔴 RHEL 8.7	KVM			12 minute...	production		Edit ▾

1 – 19 of 19 items ▾   «‹ 1 of 1 ›»

RHEL 8.6 Upgrade (Post Migration)

Recommend running
insights-client --register

Update repos to RHEL8.7 with activation key:

subscription-manager register --org="Default_Organization" --activationkey="RHEL8-AK" --force

Upgrade to RHEL8.7 latest

subscription-manager release –unset
yum -y update
reboot

*** Networking Busted! eth0 turned into ens3 ***

rename /etc/sysconfig/network-scripts/ifcfg-eth0 to ifcfg-ens3
edit /etc/sysconfig/network-scripts/ifcfg-ens3 and modify DEVICE and NAME from eth0 to ens3

Final reboot – are we done yet?

Red Hat

Red Hat Insights

Filter by tags ▼

Overview

↗ Red Hat Insights

Inventory

Advisor ›

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Vulnerability ›

Compliance ›

Malware ›

Drift ›

Resource Optimization

Policies

Subscriptions ›

Image Builder

Register Systems

Toolkit ›

Product Materials ›

Inventory › rhel7-leapp1.rhlab.skinnerlabs.com

rhel7-leapp1.rhlab.skinnerlabs.com 🏷 7

Delete

UUID: be7f7414-9487-45c4-a7a3-fc180195c33c

Last seen: 14 Feb 2023 16:23 UTC

General information   **Advisor**   Vulnerability   Compliance   Patch

---

› ☐ ▼   ☰ Description ▼   Filter by description 🔍   Remediate   1 Recommendation

Description ↕	Modified ↕	First impacted ↕	Total risk ↕	Remediation ↕
▼ ☐ Installation of packages across major releases is not supported (Incident)	4 years ago	Just now	⚠ Important	🅐 Playbook

◎ **Detected issues**

RHEL 8.7 is running on this host; however, the following packages which don't match the current major release are installed:

```
python2-leapp-0.15.0-2.el7_9
ustr-1.0.4-16.el7
leapp-upgrade-el7toel8-0.17.0-1.el7_9
leapp-0.15.0-2.el7_9
```

Hint: This may have happened due to an upgrade process.

👍 **Steps to resolve**

Red Hat recommends that you complete the following steps:

1. Remove the following packages:

```
# yum remove python2-leapp-0.15.0-2.el7_9 ustr-1.0.4-16.el7 leapp-upgrade-el7toel8-0.17.0-1.el7_9 leapp-0.15.0-2.el7_9
```

1. If necessary, install the related variants for the packages in above **RHEL8.7**.

💡 **Related Knowledgebase article**

Can I install packages from different versions of RHEL? ☐.

RHEL 8.7 Cleanup (Post Migration)

Remove any EL7 packages:

```
[root@rhel7-leapp1 ~]# rpm -qa | grep el7
python2-leapp-0.15.0-2.el7_9.noarch
ustr-1.0.4-16.el7.x86_64
leapp-upgrade-el7toel8-0.17.0-1.el7_9.noarch
kernel-3.10.0-1160.83.1.el7.x86_64
leapp-0.15.0-2.el7_9.noarch
```

Keep OLD kernel?

Insights recommends removing all but old kernel:

Use Ansible playbook to Remediate or run manually:

```
# yum remove python2-leapp-0.15.0-2.el7_9 ustr-1.0.4-16.el7 leapp-upgrade-el7toel8-0.17.0-1.el7_9
leapp-0.15.0-2.el7_9
```

Need to remove "exclude" line from /etc/yum.conf before you can remove files

Thank you

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