RHEL 8 Feature: Yum

Modernized packaging and updates
NYRHUG - August 2019

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THE CONFLICT

"

I want the latest and greatest versions of tools

—

Developers

"

I want to know everything is stable and supported

—

Operations

Red Hat

PREDICTABLE UPDATES
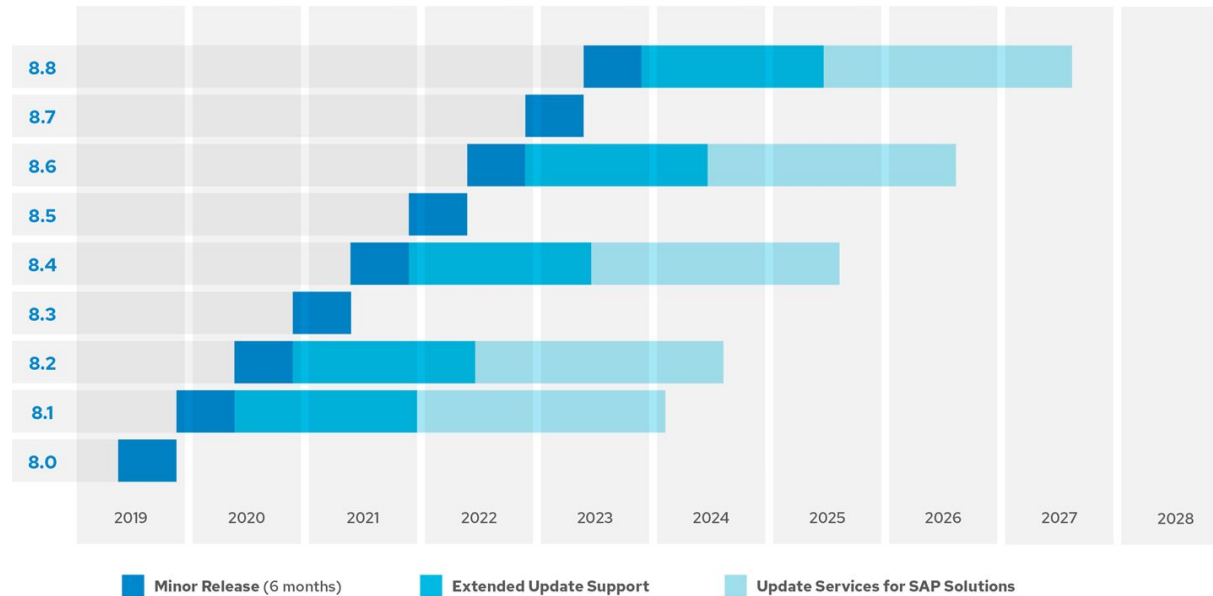
3 years
Major releases

6 months
Minor updates

2 phases
Support life cycle

Red Hat

RHEL 8 SUPPORT CYCLE
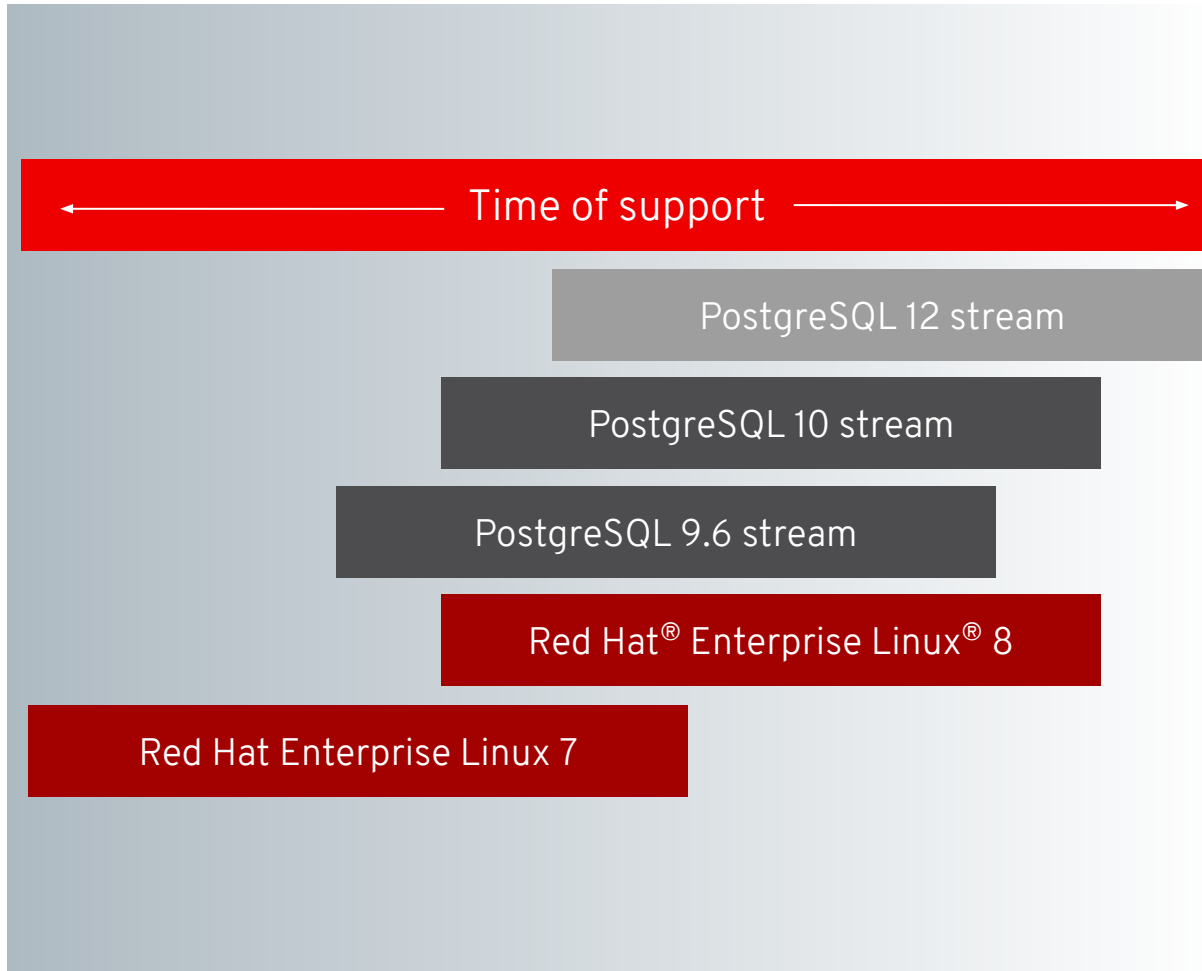
Source:https://access.redhat.com/support/policy/updates/errata

APPLICATION STREAMS

Time of support

PostgreSQL 12 stream

PostgreSQL 10 stream

PostgreSQL 9.6 stream

Red Hat® Enterprise Linux® 8

Red Hat Enterprise Linux 7

More choice
Offers versions of the open source tools and frameworks developers need

Newer versions
Provides access to newer versions as they stabilize

Simpler access
Maintains standard locations for tools and libraries

SIMPLIFIED ACCESS TO SOFTWARE
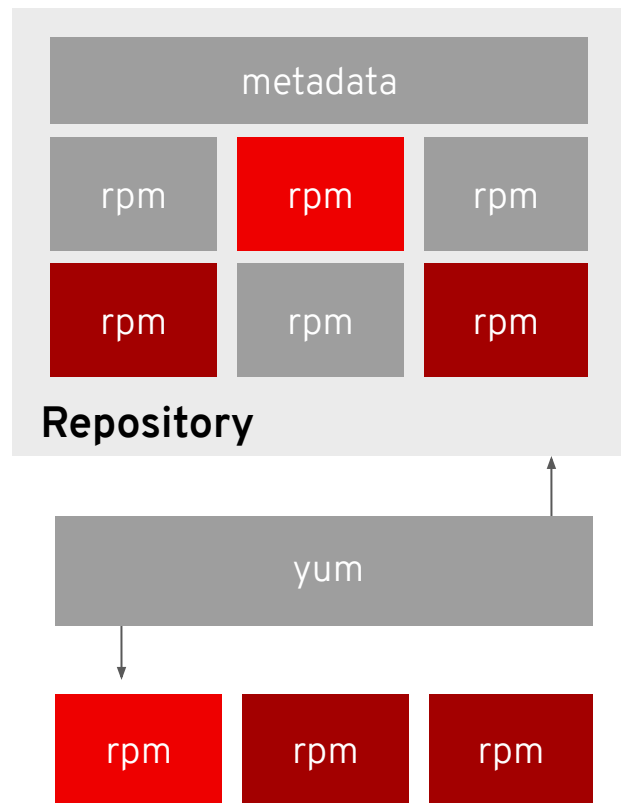
Red Hat Enterprise Linux 7 repositories

extras	rhscl	dotnet	devtools	supplementary	optional

server

Red Hat Enterprise Linux 8 repositories

appstream	supplementary	codeready-builder

baseos

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YUMv4

- New technology
  - RPM 4.14
  - YUM v4 (based on DNF)
- Better dependency management
- Stable API

MODULES vs SCL

Modules are the next generations SCLs

Advantages vs SCLs

- Modules install in the same locations as upstream versions
- All application tooling works out of the box
- Client connectors work without the need for wrappers and links
- Modules don't need to be specifically enabled in a shell

Disadvantages vs SCLs

- Only one version of a module may be installed on a system at a time
- Modules may have cross dependencies that prevent some combinations of modules from working on the same system with other modules

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YUMv4: MODULES

- Modularity features are available through the yum module command.
- Modularity is implemented in a way that is compatible with existing YUM v3 workflows.
- Using modularity features is optional, not mandatory.
- Implementation details:
  - Module streams are treated as virtual repositories within the AppStream repository.
  - Module streams have dependencies that allow to auto-enable dependent streams.
  - Module profiles are treated as package groups.

Source:https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/8/html/installing_managing_and_removing_user_space_components/installing-rhel-8-content_using-appstream

DEMO

- yum module list
- yum module list postgresql
- yum module info postgresql:9.6
- yum module info postgresql:9.6 –-profile
- yum module install postgresql:9.6/client
- yum module install postgresql
- yum module enable postgresql:10
- yum distro-sync
- yum module reset postgresql
- yum module list postgresql

Thank you

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